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THE BOSTON MEDICAL AND SURGICAL JOURNAL.

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THE MEDICAL JOURNALS OF THE UNITED STATES.

BY J. S. BILLINGS, M. D., SURGEON UNITED STATES ARMY.

THE Boston Medical and Surgical Journal has now been issued for fifty years, and it is thought that some account of the medical journals which have appeared in this country to the present time will form a fitting and useful introduction to what it is hoped will prove to be the second half century of its existence.

The first number of this journal is dated February 19, 1828, and formed the continuation and consolidation of the *New England Journal of Medicine and Surgery* and the *Boston Medical Intelligencer*, the particulars with regard to which will be found in the list to be given at the end of these remarks.

The first editors of this journal were Drs. J. C. Warren, W. Channing, and John Ware. After these came Dr. Chandler Robbins and Dr. James Wilson, and in Vol. XI., 1835, the name of Dr. J. V. C. Smith appears on the title-page (MS. note of Dr. B. E. Cotting), the publication of the journal at the same time passing into the hands of Mr. D. Clapp as publisher.

At the time of its commencement there were in existence in the United States eight medical journals, namely: in Philadelphia, *The American Journal of the Medical Sciences*, *The American Medical Recorder*, *The Monthly Journal of Foreign Medicine*, *The North American Medical and Surgical Journal*, and *The Philadelphia Monthly Journal of Medicine and Surgery* (which ceased February 28, 1828); in New York, *The New York Medical and Physical Journal*; in Cincinnati, *The Western Medical and Physical Journal*; and in Lexington, Ky., the *Transylvania Journal of Medicine and the Associate Sciences*.

Prior to this time thirty-one medical journals had been commenced in the United States, twenty-three of which had suspended or merged in other journals.

The following table shows by quinquennial periods the number of medical journals which have commenced and ceased in this country, excluding those devoted to pharmacy and dentistry: —

Years, both inclusive.	Regular.		Homœopathic.		Botanic.		Eclectic.	
	Begun.	Closed.	Begun.	Closed.	Begun.	Closed.	Begun.	Closed.
1797-1802	2							
1803-1807	2							
1808-1812	6	5						
1813-1817	1							
1818-1822	7	2						
1823-1827	13	14						
1828-1832	11	14			1			
1833-1837	12	10			7	2	1	
1838-1842	12	14	3	2	6	5		
1843-1847	17	5	3	1	3	6	4	2
1848-1852	21	7	10	5	1	2	4	4
1853-1857	21	27	4	10	1	3	5	8
1858-1862	32	35	5	5		1	5	4
1863-1867	18	15	13	4			5	3
1868-1872	31	22	6	7			6	6
1873-1877	30	24	8	9			11	7
1878	13	2	1				1	1
Total.	250	196	53	43	19	19	42	35

The following mortality statistics of our medical journals will be found interesting:—

	No. of titles commenced.	No. of vols. commenced.	Only one No. issued.	Vol. I. not completed.	No. that did not go beyond Vol. I.	Not beyond Vol. II.	Current, November, 1878.
Regular	247	1630	10	21	61	39	53
Homœopathic	53	214	3	8	22	5	9
Botanic, etc.	21	91		4	5	9	
Eclectic	41	169	8	6	17	5	7
Popular	124	431	20	22	71	12	2
Pharmaceutical	25	167		3	9		2
Dental	33	187	1	6	10	4	1
Reprints	13	198	1	1	4		2

The preceding tables, if examined in connection with the following list of our medical journals as arranged by States, afford abundant material for comment and reflection, but it is believed that the limited space available can be more usefully employed in giving the list referred to than in pointing out the errors of those who are responsible for the existence of such a list. It is as useless to advise a man not to start a new journal as it is to advise him not to commit suicide.

As I have elsewhere remarked, the motive for the existence of the minor journals is not for direct profit, but as an indirect advertisement, or — and this is more common — the desire to have a place in which the editor can speak his mind and attack his enemies without restraint. How shall the would-be journalist be persuaded that no one except his personal acquaintances will care anything about his opinions, his praise, or his blame?

It will be found interesting to compare the geographical distribution of this class of publications, and to inquire why, for instance, Baltimore medical journals are so short-lived, why New England has produced so few in comparison with Ohio and Kentucky, etc., etc.

LIST OF MEDICAL JOURNALS OF THE UNITED STATES ARRANGED BY STATES.

ARKANSAS. — The Arkansas Medical Record. Monthly. Conducted by J. I. Hall. Little Rock. Nos. 1-4, Vol. I. January to April, 1878. 8vo.

CALIFORNIA. — The San Francisco Medical Journal. W. H. Miller, Editor. San Francisco. No. 1, Vol. I. January, 1856. 8vo. The California State Medical Journal. Quarterly. J. F. Morse, Editor. Sacramento. Vol. I. July, 1856, to April, 1857. 8vo. The Marysville Medical and Surgical Reporter. Quarterly. L. Hubbard and H. W. Teed, Editors. San Francisco. No. 1, Vol. I. November, 1858. 8vo. The Pacific Medical and Surgical Journal. Monthly. Edited by J. B. Trask and others. San Francisco. Vols. I.-IX. 1858-67. New Series, Vols. I.-XI. 1867-78. 8vo. Current. In 1865 absorbed the following, and added the words "and Press" to its title. The San Francisco Medical Press. Quarterly. Edited by E. S. Cowper. San Francisco. Vols. I.-IV. 1860-65. 8vo. Consolidated with the preceding. The California Medical Gazette. Monthly. Edited by T. Bennett and others. San Francisco. Vols. I.-II. July, 1868, to August, 1870. 4to. The Western Lancet. Monthly. Edited by E. Trenor and others. San Francisco. Vols. I.-VII. 1872-78. 8vo.

CONNECTICUT. — The Monthly Journal of Medicine. Hartford. Conducted by an association of physicians. Vols. I.-VI. January, 1823, to December, 1825. 8vo. The American Annals of the Deaf and Dumb. Quarterly. Edited by L. Ray and others. Hartford. Vols. I.-XXIII. 1847-61. Washington, D. C. 1868-78. 8vo. The Quarterly Journal of Inebriety. Hartford. Vols. I.-II. 1876-78. 8vo.

DISTRICT OF COLUMBIA. — The Register and Library of Medical and Chirurgical Science. Weekly. Edited by G. S. Pattison and J. Hagan. Washington. Vols. I.-II. 1833-36. 8vo. Vol. II. ends abruptly with page 440. The National Medical Journal. Quarterly. Washington. Edited by C. C. Cox and others. Vols. I.-II. 1870-72. Became monthly in Vol. II. No. 10, Vol. II., last published. National Medical Review. Walter S. Wells, Editor. Monthly. No. 1, Vol. I. December, 1878. Washington, D. C. 8vo.

GEORGIA. — The Southern Medical and Surgical Journal. Monthly. Edited by M. Antony and J. A. Eve. Augusta. Vols. I.-III. 1836-39. New Series, Vols. I.-XVII. 1845-61. Third Series, Vol. I. 1866-67. 8vo. The Georgia Blister and Critic. Monthly. Edited by H. A. Ramsay and W. T. Grant. Atlanta. Vol. I., and No. 1, Vol. II. 1854-55. 8vo. Atlanta Medical and Surgical Journal. Monthly. Edited by J. P. Logan, W. F. Westmoreland, and others. Atlanta. Vols. I.-XVII. 1855-61, 1866-78. 8vo. The Oglethorpe Medical and Surgical Journal. Bi-Monthly. H. L. Boyd and others, Editors. Savannah. Vols. I.-III. 1858-61. 8vo. The Savannah Journal of Medicine. Bi-Monthly. Edited by J. S. Sullivan, R. D. Arnold, and others. Savannah. Vols. I.-IV. 1858-61. New Series, Vol. V. 1866. 8vo. The Georgia Medical and Surgical Encyclopedia. Monthly. Edited by H. N. Hollifield and T. W. Newsome. Sandersville. Nos. 1-8, Vol. I. May to December, 1860. 8vo. The Semi-Monthly Medical and Surgical Journal. Edited by E. F. and J. J. Knott. Griffin, Ga. Nos. 1-4, Vol. I. 1871. 8vo. The Georgia Medical Companion. Monthly. Edited by T. S. Powell and W. T. Goldsmith. Atlanta. Vols. I.-II. 1871-72. 8vo. Continued as the following. The Southern Medical Record. Monthly. Atlanta. Vols. III.-VIII. 1873-78. 8vo. Continuation of preceding.

ILLINOIS. — The Illinois Medical and Surgical Journal. Monthly. Edited by J. V. Z. Blaney. Chicago. Vols. I.-II. 1844-46. 8vo. Continued as the following. The Illinois and Indiana Medical and Surgical Journal. Bi-Monthly. Edited by J. V. Z. Blaney, D. Brainard, and others. Chicago. Vols. I.-II. 1846-48. 8vo. Continuation of the preceding, and continued as the following. The Northwestern Medical and Surgical Journal. Bi-Monthly. Edited by W. B. Herrick and J. Evans. Chicago. Vols. V.-XIV. 1848-57. 8vo. Continuation of the preceding, and continued as the following. The Chicago Medical Journal. Monthly. Edited by N. S. Davis and W. H. Byford. Chicago. Vols. XV.-XXXI. 1858-75. 8vo. Continuation of the preceding, and consolidated with the Medical Examiner, Chicago, forming the following. Vols. XXV. and XXVI. Semi-Monthly. The Chicago Medical Journal and Examiner. Edited by W. H. Byford and others. Chicago. Vols. XXXII.-XXXVII. 1875-78. 8vo. Current. Formed by the consolidation of the pre-

ceding with the Chicago Medical Examiner. The Northwestern Medical Intelligencer. Bi-Monthly. Chicago. 1851. 8vo. This alternated with the Northwestern Medical and Surgical Journal, of which it formed a part. The Chicago Medical Examiner. Monthly. Edited by N. S. Davis and E. A. Steele. Chicago. Vols. I.-XII. 1860-71. 8vo. Continued as the following. The Medical Examiner. Chicago. Semi-Monthly. Edited by N. S. and F. H. Davis. Vols. XIII.-XVI. 1872-75. 4to. In September, 1875, united with The Chicago Medical Journal, forming The Chicago Medical Journal and Examiner. The Military Tract Medical Reporter. L. S. and C. A. Lambert. Galesburg, Ill. Prospectus issued in August, 1871, but the journal never appeared. The Chicago Journal of Nervous and Mental Disease. Edited by J. S. Jewell and others. Chicago. Vols. I.-II. 1874-75. 8vo. Continued as the following. The Journal of Nervous and Mental Disease. Edited by J. S. Jewell and others. Chicago. Vols. I.-III., New Series. 1876-78. 8vo. Continuation of the preceding. The Medical Register and Advertiser. Quarterly. Edited by J. I. Hale. Anna, Ill. Nos. 1-2, Vol. I. 1875. 8vo. The Monthly Journal of the Southern Illinois Medical Association. Edited by C. W. Dunning and H. Wardner. Cairo. Vols. I.-II. 1877-78. Vol. I. in six numbers. Current. The Illinois Medical Recorder. Monthly. Edited by R. E. Beach. Published under the auspices of the District Medical Society of Central Illinois. Nos. 1-6. June to November, 1878. 8vo. Current. The American Medical Review and Index. Monthly. James I. Hale, Editor. Anna, Ill. Nos. 1-3. July to September, 1878. 8vo. Current.

INDIANA. — The Indiana Medical Journal. Quarterly. Edited by W. H. Byford and H. Ronalds. Evansville. No. 1, Vol. I. 1854. 8vo. Running title of first signature is The Evansville Medical Journal, etc. The Indiana Journal of Medicine and Surgery. Monthly. Edited by J. Jackson and T. W. Forshee. Madison. No. 1, Vol. I. 1855. 8vo. The Indiana Journal of Medicine. Monthly. Edited by T. W. Stevens and others. Indianapolis. Vols. I.-VI. 1870-75. 8vo. After September, 1875, united with The Cincinnati Lancet and Observer. The Western Retrospect of Medicine and Surgery. Monthly. Edited by H. M. Harvey, H. A. Lewis, and others. Evansville. Vol. I. January to December, 1872. 8vo.

IOWA. — The Western Medico-Chirurgical Journal. Monthly. Edited by J. F. Sanford and S. G. Armor. Keokuk. Vols. I.-II. 1850-53, No. 1, Vol. III. 1854. 8vo. The Iowa Medical Journal. Monthly. Edited by J. C. Hughes and W. R. Marsh. Keokuk. Five volumes. 1853-69. 8vo. The Iowa Catlin. Monthly. Edited by E. Lawrence. Osceola, Iowa. Nos. 1 and 2. April and May, 1878. 8vo.

KANSAS. — The Leavenworth Medical Herald. Monthly. Edited by C. A. Logan, T. Sinks, and others. Leavenworth. Vols. I.-III. 1867-70. 8vo. Continued as the following. The Leavenworth Medical Herald and Journal of Pharmacy. Leavenworth. Vols. IV.-V. 1870-72. 8vo. Continuation of the preceding and succeeded by the following. The Medical Herald. Leavenworth. Vols. VI.-IX. 1872-75. 8vo. Continuation of the preceding.

KENTUCKY. — The Transylvania Journal of Medicine and the Associate Sciences. Quarterly. Edited by J. E. Cooke and C. W. Short. Lexington, Ky. Vols. I.-XII. 1828-39. 8vo. The Louisville Journal of Medicine and Surgery. Quarterly. Edited by L. P. Yandell, H. Miller, and others. Louisville. Nos. 1 and 2, Vol. I. 1838. 8vo. January, 1840, revived, and consolidated with the Western Journal of the Medical and Physical Sciences, forming the following. The Western Journal of Medicine and Surgery. Monthly. Edited by D. Drake and L. P. Yandell. Louisville. Thirty-two volumes. 1840-55. 8vo. Continuation of the preceding and continued as the following. The Louisville Review. Monthly. Edited by S. D. Gross and T. G. Richardson. Louisville. Vol. I. 1856. 8vo. Continuation of the preceding. In January, 1857, united with The Medical Examiner, Philadelphia, forming the North American Medico-Chirurgical Review. The Western and Southern Medical Recorder. Monthly. Edited by J. C. Cross. Lexington. Vol. I. 1841-42. Nos. 1-4. Vol. II. 1843. 8vo. Merged in the Western Lancet. The Transylvania Medical Journal. Bi-Monthly. Edited by E. L. Dudley. Five volumes. 1849-54. Lexington and Louisville. Vol. III. is Vol. I. New Series. Title, The Kentucky Medical Recorder. The Louisville Medical Gazette. Bi-Weekly. Edited by L. J. Frazer. Louisville. Nos. 1-7, Vol. I. 1859. 8vo. The Semi-Monthly Medical News. Edited by S. M. Be-

miss and J. W. Benson. Louisville. Vols. I.-III. 1859-60. 8vo. Vols. II. and III. Title. *The Monthly Medical News. The Louisville Medical Journal.* Monthly. Edited by T. W. Colescott. Louisville. Nos. 1-6, Vol. I. 1860. 8vo. *The Richmond and Louisville Medical Journal.* Monthly. E. S. Gaillard, Editor. Louisville. Vols. VI.-XXVI. 1868-78. 8vo. Continuation of the *Richmond Medical Journal. The American Practitioner.* Formerly *Western Journal of Medicine.* Monthly. Edited by D. W. Yandell and T. Parvin. Louisville. Vols. I.-XVIII. 1870-78. 8vo. Current. *The Louisville Medical Reporter.* Weekly. Edited by J. L. Cook and others. Henderson. No. 1, Vol. I. 1874. 8vo. *The American Medical Weekly.* E. S. Gaillard, Editor. Louisville. Vols. I.-IV. 1874-76. 8vo. Continued as the following. Vol. II. is paged consecutively with Vol. I. *The American Medical Bi-Weekly.* E. S. Gaillard, Editor. Louisville. Vols. VI.-IX. 1877-78. 8vo. Continuation of the preceding. *The Louisville Medical News.* Weekly. Edited by R. O. Cowling and others. Louisville. Vols. I.-VI. 1876-78. 8vo. Current.

LOUISIANA. — *Journal de la Société médicale de la Nouvelle Orleans.* Quarterly. Drs. Fortin, Daret, and others. New Orleans. Année I. 1839. 8vo. *The New Orleans Medical Journal.* Bi-Monthly. Edited by E. D. Fenner and A. Hester. New Orleans. Vol. I. 1844-45. 8vo. Continued as the following. *The New Orleans Medical and Surgical Journal.* Bi-Monthly. Edited by W. M. Carpenter, E. D. Fenner, and others. New Orleans. Vols. II.-XX. 1845-61 and 1866-67. 8vo. Consolidated with the *Southern Journal of the Medical Sciences*, forming the following. *The New Orleans Journal of Medicine.* Quarterly. Edited by S. M. Bemiss and W. S. Mitchell. New Orleans. Vols. XXI.-XXIII. 1868-70. 8vo. Continued as the following in 1873. *The New Orleans Medical and Surgical Journal.* New Series. Bi-Monthly. Edited by S. M. Bemiss. New Orleans. Vols. I.-IV. 1873-78. 8vo. Current. *The Louisiana Medical and Surgical Journal.* Title of a periodical projected in 1845, but never issued, the *New Orleans Medical and Surgical Journal* taking its place. *The New Orleans Monthly Medical Register.* Edited by A. F. Axon. Vols. I.-II. 1851-53. 8vo. In March, 1854, merged in *The New Orleans Medical News and Hospital Gazette. L'Union médicale de la Louisiane.* Monthly. C. Deléry, Editor. New Orleans. Vol. I. 1852. 8vo. *The New Orleans Medical News and Hospital Gazette.* Semi-Monthly. Edited by S. Choppin, C. Beard, and others. New Orleans. Vols. I.-VII. 1854-61. 8vo. Continued as the following. *The New Orleans Medical Times.* Monthly. Edited by A. Peniston. New Orleans. Nos. 1-3. 1861. 8vo. Continuation of the preceding. *Journal de la Société médicale de la Nouvelle Orleans.* Monthly. Edited by Dr. Thiery. Vol. I. Nos. 1-8, Vol. II. 1859-61. *The New Orleans Medical Record.* Semi-Monthly. Edited by B. Dowler and S. R. Chambers. New Orleans. Nos. 1-4, Vol. I. 1866. Royal 8vo. *The Southern Journal of the Medical Sciences.* Quarterly. E. D. Fenner, D. W. Brickell, and others. New Orleans. Vols. I.-II. 1866-67. 8vo. In January, 1868, consolidated with the *New Orleans Medical and Surgical Journal*, forming the *New Orleans Journal of Medicine*.

MAINE. — *The Journal of the Medical Society of the State of Maine.* Hallowell. No. 1, Vol. I. January, 1834. 8vo. *The Maine Medical and Surgical Reporter.* Monthly. Edited by W. R. Richardson and R. W. Cummings. Portland. Vol. I. 1858-59. 8vo.

MARYLAND. — *The Baltimore Medical and Physical Recorder.* Quarterly. Conducted by T. Watkins. Baltimore. Vol. I., and No. 1 of Vol. II. 1808-09. 8vo. *The Baltimore Medical and Philosophical Lyceum.* Quarterly. Edited by N. Potter. Baltimore. One volume. 1811. 8vo. *The Vaccine Inquirer.* Monthly. Baltimore. No. 1, February, 1822; No. 4, May, 1822; No. 5, 1824. Announced as monthly, but published at irregular intervals. *The Baltimore Philosophical Journal and Review.* Quarterly. Edited by J. B. Davidge. Baltimore. No. 1. July, 1823. 8vo. *The Maryland Medical Recorder.* Quarterly. Edited by H. G. Jameson. Baltimore. Vols. I.-III. 1829-32. 8vo. *The Baltimore Monthly Journal of Medicine and Surgery.* Edited by N. R. Smith. Baltimore. One volume. 1830-31. 8vo. *The Baltimore Medical and Surgical Journal and Review.* Quarterly. Edited by E. Geddings. Baltimore. Vols. I.-II. 1833-34. 8vo. Continued as the following. *North American Archives of Medical and Surgical Science.* Monthly. Edited by E. Geddings. Baltimore. Vols. I.-II. 1834-35. 8vo. Continuation of the preceding. *The Maryland Medical and Surgical Journal and Official Organ of the Medical Department of the Army and Navy of the United States.* Quarterly. Baltimore. Vols.

I.-III. 1840-43. 8vo. The Baltimore Journal of Medicine. Bi-Monthly. Edited by E. Warren. Baltimore. Nos. 1-3, Vol. I. January to May, 1861. 8vo. The Medical Bulletin. Semi-Monthly. Edited by E. Warren. Baltimore. Vols. I.-II. 1868-70. Folio. In 1871 merged in the following. The Baltimore Medical Journal. Monthly. Edited by E. L. Howard and T. S. Latimer. Baltimore. Two volumes. 1870-71. 8vo. In Vol. II. title changed to Baltimore Medical Journal and Bulletin. In January, 1871, the Bulletin merged in this. The Baltimore Physician and Surgeon. Monthly. Baltimore. Vols. I.-VI. 1872-76. 4to. The title of Vol. I., 1872-73, was The Physician and Surgeon. Maryland Medical Journal. Monthly. H. E. T. Manning and T. A. Ashby, Editors. Baltimore. Vols. I.-III. 1877-78. 8vo. Current.

MASSACHUSETTS.—The New England Journal of Medicine and Surgery and the Collateral Branches of Science. Quarterly. Boston. Vols. I.-XVI. 1812-27. 8vo. Continued as The Boston Medical and Surgical Journal. Vol. XVI., title, New England Medical Review and Journal. The Boston Medical Intelligencer. Weekly. Edited by J. V. C. Smith. Boston. Five volumes. 1823-28. 4to. Continued as The Boston Medical and Surgical Journal. The Boston Medical and Surgical Journal. Boston. Weekly. Ninety-nine volumes. 1828-78. 8vo. Current. Formed by consolidation of the two preceding. American Journal of Foreign Medicine. Monthly. Conducted by an association of physicians. Boston. No. 1, Vol. I. June, 1827. The Monthly Journal of Medical Literature and American Students' Gazette. Edited by E. Bartlett. Boston and Lowell. Nos. 1-3, Vol. I. January to March, 1832. 8vo. The Medical Magazine. Monthly. Edited by A. L. Peirson, J. B. Flint, E. Bartlett, and others. Boston. Three volumes. 1832-35. 8vo. The American Medical Almanac. Annual. Edited by J. V. C. Smith. Boston. Two volumes. 1839-40. 12mo. The New England Quarterly Journal of Medicine and Surgery. Edited by C. E. Ware and S. Parkman. Boston. Vol. I. 1842-43. 8vo. The Medical World. Weekly. Edited by J. V. C. Smith and E. S. Smith. Boston. Two volumes. 1856-57. 4to. The Berkshire Medical Journal. Monthly. Edited by W. H. Thayer and R. C. Stiles. Pittsfield. One volume. 1861. 8vo. The Journal of the Gynaecological Society of Boston. Monthly. Edited by W. Lewis, H. R. Storer, and G. H. Bixby. Boston. Five volumes. 1869-72. 8vo.

MICHIGAN.—The Peninsular Journal of Medicine and the Collateral Sciences. Monthly. Edited by E. Andrews, A. B. Palmer, and others. Ann Arbor and Detroit. Vols. I.-V. 1853-58. 8vo. Continued as The Peninsular and Independent Medical Journal. The Medical Independent and Monthly Review of Medicine and Surgery. Edited by H. Goadby and others. Detroit. Three volumes. 1856-58. 8vo. Continued as The Peninsular and Independent Medical Journal. The Peninsular and Independent Medical Journal. Monthly. Edited by A. B. Palmer, M. Gunn, and F. Stearns. Detroit. Vols. I.-II. 1858-60. 8vo. Formed by consolidation of the two preceding in April, 1858. The Detroit Review of Medicine and Pharmacy. Monthly. Edited by G. P. Andrews and others. Detroit. Vols. I.-IX. 1866-76. 8vo. Merged in The Detroit Medical Journal. The Michigan University Medical Journal. Monthly. Conducted by the faculty of the medical department. Ann Arbor. Three volumes. 1870-73. 8vo. The Western Medical Advocate and Progress of Pharmacy. Quarterly. W. H. Lathrop, Editor. Detroit. Vols. I.-II. June, 1871, to June, 1873. 4to. The Peninsular Journal of Medicine. Monthly. Edited by H. F. Lyster and others. Detroit. Four volumes. 1873-76. 8vo. Consolidated with The Detroit Review of Medicine and Pharmacy, forming the following. The Detroit Medical Journal. Monthly. Edited by L. Connor and others. Detroit. New Series. Vol. I. 1877. 8vo. Consolidation of The Peninsular Journal of Medicine with The Detroit Review of Medicine and Pharmacy. The Detroit Lancet. Monthly. Edited by H. A. Cleland and L. Connor. Detroit. Vol. I. 1878. 8vo. Current. The Michigan Medical News. Semi-Monthly. J. J. Mulheron, Editor. Detroit. Vol. I. 1878. 8vo. Current.

MINNESOTA.—The Northwestern Medical and Surgical Journal. Monthly. Edited by W. B. Herrick and J. Evans. St. Paul. Vols. I.-IV. 1870-74. 8vo.

MISSOURI.—The St. Louis Medical and Surgical Journal. Monthly. Edited by M. L. Linton, W. M. McPheeters, and others. St. Louis. Nos. 1-9, 11, 12. Vol. I. 1843-44. No. 12, Vol. II. 1844-45. Vols. III.-XIX. 1845-61. Also, New Series. Vols. III.-

XV. 1866-78. 8vo. In September, 1848, The Missouri Medical and Surgical Journal was united with this. The Missouri Medical and Surgical Journal. Monthly. Edited by R. F. Stevens, J. N. McDowell, and others. St. Louis. Vols. I.-IV. 1845-48. 8vo. In September, 1848, merged in the preceding. The St. Louis Probe. Monthly. Edited by H. J. Coons and J. R. Atkinson. St. Louis. Vol. I. 1850. 8vo. The St. Joseph Journal of Medicine and Surgery. Bi-Monthly. Edited by J. H. Crane, O. B. Knobe, and others. St. Joseph. Nos. 4, 5, Vol. I., March, May, 1859. Nos. 1, 2, 4, 5, Vol. II. September, November, 1859, March, May, 1860. Nos. 1-3, Vol. III., September, 1860, to January, 1861. 8vo. The Kansas City Medical and Surgical Review. Bi-Monthly. G. M. B. Maughs and T. C. Case, Editors. Kansas City, Mo. One volume. 1860. 8vo. The Medical and Surgical Pioneer. Monthly. Edited by J. Keller. Kansas City, Mo. Nos. 1, 2, Vol. I. 1866. 8vo. The St. Louis Medical Reporter. Semi-Monthly. Edited by J. S. B. Alleyne, O. F. Potter, and others. St. Louis. Vols. I.-IV. 1866-69. 8vo. Merged in The Medical Archives. The Humboldt Medical Archives. Monthly. Edited by Pallen E. F. Smith, A. Hammer, and others. St. Louis. Vol. I., in six numbers. September, 1867, to February, 1868. Vol. II., in ten numbers, March to December, 1868. Vol. III., in twelve numbers, January to December, 1869. Vol. IV., in six numbers, January to June, 1870. Vol. V., in six numbers, September, 1870, to February, 1871. Vol. VI., in six numbers, March to August, 1871. Vol. VII., in six numbers, September, 1871, to February, 1872. Vol. VIII., in ten numbers, March to December, 1872. Vol. IX., in five numbers, January to May, 1873. After Vol. II., title, The Medical Archives. In September, 1869, the preceding merged in this. The Kansas City Medical Journal. Bi-Monthly. Edited by A. P. Lankford and others. Kansas City, Mo. Vols. I.-V. 1871-75. 8vo. Became monthly with Vol. IV. Missouri Clinical Record. Monthly. Edited by W. A. Hardaway. St. Louis. Vol. J. 1874-75. 8vo. Continued as the following. St. Louis Clinical Record. Monthly. Edited by W. A. Hardaway. St. Louis. Vols. II.-IV. 1875-78. 8vo. Current. Continuation of the preceding.

NEW HAMPSHIRE.—The New Hampshire Journal of Medicine. Monthly. Edited by E. H. Parker. Concord. Vols. I.-VIII. 1850-58. 8vo. Vols. VI.-VIII., published at Manchester.

NEW JERSEY.—The New Jersey Medical Reporter and Transactions of the New Jersey Medical Society. Quarterly. Edited by Joseph Parrish. Burlington. Vols. I.-VIII. 1847-55. 8vo. Vol. V. became monthly. Continued as the following. The Medical and Surgical Reporter. Monthly. Edited by S. W. Butler. Burlington, N. J., and Philadelphia. Vols. IX.-XI. 1856-58. 8vo. Vol. XI., and continuation published at Philadelphia. Current.

NEW YORK.—A Journal of the Practice of Medicine, Surgery, and Pharmacy in the Military Hospitals of France. Published by order of the king. Reviewed and digested by M. De Horne. Translated by Joseph Browne. No. 1, Vol. I. New York. No date. 1783 or 1790. The Medical Repository. Quarterly. Conducted by S. L. Mitchell, E. Miller, and E. H. Smith. New York. Vols. I.-XXIII. 1797-1824. 8vo. Slight change of title. The New York Medical and Philosophical Journal and Review. Semi-Annual. New York. Vols. I.-III. 1809-11. 8vo. The American Medical and Philosophical Register. Quarterly. Conducted by David Hosack and John W. Francis. New York. Vols. I.-IV. 1810-14. 8vo. Two editions of Vol. I. The New York Medical Magazine. Annual. Edited by V. Mott and H. M. Onderdonk. New York. Vol. I. (in two numbers). 1814-15. 8vo. The Medical and Surgical Register. Edited by J. Watts, Jr., V. Mott, and A. H. Stevens. New York. Vol. I. 1818-20. 8vo. The New York Medical and Physical Journal. Quarterly. Edited by J. W. Francis and others. New York. Vols. I.-IX. 1822-30. 8vo. The New York Monthly Chronicle of Medicine and Surgery. By an Association of Physicians. New York. Vol. I. 1824-25. 8vo. The New York Medical Journal. Quarterly. Conducted by D. L. M. Pixotto, J. R. Rhinelander, and J. J. Graves. New York. Two volumes. 1830-31. 8vo. The New York Medico Chirurgical Bulletin. Monthly. Edited by George Bushe. New York. Two volumes. 1831-32. 8vo. The United States Medical and Surgical Journal. Monthly. Edited by an Association of Physicians. New York. Vols. I.-III. 1834-36. 8vo. After No. 2, September, 1834, published at New York and Philadelphia. The New York Journal of Medicine and Surgery. Quarterly. New York. Vols. I.-IV. 1839-41. 8vo. The New York Medical Gazette.

Weekly. Published by W. Turner. New York. Vols. I.-II. 1841-42. 8vo. The New York Lancet. Weekly. Edited by J. A. Houston. New York. Vols. I.-II., and Nos. 1-4, Vol. III. 1842-43. 8vo. Albany Journal of Neurology. Monthly. By an Association of Physicians. Albany. No. 1, Vol. I. July, 1843. 8vo. The New York Journal of Medicine and the Collateral Sciences. Bi-Monthly. Edited by S. Forry and others. New York. Thirty-four volumes. 1843-60. 8vo. For continuation, see The American Medical Times. Vol. I. Third Series. In 1856, the words "and the Collateral Sciences" dropped from the title-page. The New York Medical Times merged in this journal. The American Journal of Insanity. Quarterly. Edited by medical officer of the New York State Lunatic Asylum, Utica, N. Y. Vols. I.-XXXIV. 1844-78. 8vo. Current. The New York Medical and Surgical Reporter. Bi-Weekly. Edited by C. T. Collins. New York. Vol. I., 1845-46, and Nos. 1-18, Vol. II., 1847. 8vo. The Buffalo Medical Journal. Monthly. Edited by A. Flint. Buffalo. Fifteen volumes. 1845-60. 8vo. In July, 1860, merged in The American Medical Monthly. The Annalist. Bi-Weekly. Edited by W. C. Roberts and N. S. Davis. New York. Three volumes. 1846-49. 8vo. Wood's Addenda to the Medico-Chirurgical Review. Quarterly. New York. Two volumes. 1847-49. 8vo. Also issued in somewhat different form as Wood's Quarterly Retrospect of American and Foreign Practical Medicine and Surgery. The New York Register of Medicine and Pharmacy. Semi-Monthly. Edited by C. D. Griswold. New York. Two volumes. 1850-51. 8vo. The Northern Lancet and Gazette of Legal Medicine. Monthly. Edited by F. J. D'Avignon and H. Nelson. Plattsburgh, N. Y. Vols. I.-XII. 1850-55. 8vo. Vols. IV.-VI., title, Nelson's Northern Lancet, etc.; Vols. VII.-XII., title, Nelson's American Lancet, etc. The New York Medical Gazette and Journal of Health. Weekly and Monthly. Edited by D. M. Reese. New York. Twelve volumes. 1850-61. 4to and 8vo. Vols. VI.-VIII., title, The American Medical Gazette and Journal of Health. Vols. IX.-XII., title, The American Medical Gazette. The New York Medical Times. Monthly. Edited by J. G. Adams and others. New York. Vols. I.-V. 1851-56. 8vo. Merged in The New York Journal of Medicine. New Yorker Medicinische Monatsschrift. Edited by J. Herzka, E. Krakowitzer, and W. Roth. New York. Jahrg. I. 1852-53. 8vo. The American Medical Monthly. Conducted by Horace Green and others. New York. Vols. I.-XVIII. 1854-62. 8vo. The North American Medical Reporter. Quarterly. Edited by W. Elmer. New York. Vol. I. 1858-59. 8vo. The New York Medical Press. Weekly. Edited by J. L. Kiernan and W. O. Meagher. New York. Vols. I.-III. 1859-60. Royal 8vo. Four preliminary numbers were issued in 1858. In July, 1860, merged in The American Medical Times. The Buffalo Medical and Surgical Journal and Reporter. Monthly. Edited by J. F. Miner. Buffalo. Vols. I.-XVII. 1860-78. 8vo. Current. In Vol. II., 1860, the words "and Reporter" dropped from title. The American Medical Times. Weekly. Edited by Stephen Smith. New York. Vols. I.-IX. 1860-64. 4to. Continuation of The New York Journal of Medicine. In July, 1860, The New York Medical Press merged in this. Summary of Medical Science. Semi-Annual. Edited by W. S. Wells. New York. Part I. April, 1861. 8vo. American Journal of Ophthalmology. Bi-Monthly. Edited by J. Homberger. New York. Vol. I. 1862-63, and Nos. 1-2, Vol. II. 1864. 8vo. Vol. II. became quarterly. Nord Americanische Deutsch' medizinische Zeitschrift für praktische Heilkunde. Bi-Monthly. Edited by W. Meisburger. Buffalo. Nos. 1-3. Vol. I. 1865. 8vo. The New York Medical Journal. Monthly. Edited by W. A. Hammond, E. S. Dunster, and others. New York. Twenty-eight volumes. 1865-78. 8vo. Current. The Medical Record. Semi-Monthly. Edited by G. F. Shrady. New York. Fourteen volumes. 1866-78. 4to. Current. Vol. X., 1875, became weekly. The Quarterly Journal of Psychological Medicine and Medical Jurisprudence. Edited by W. A. Hammond. New York. Vols. I.-III. 1867-69. 8vo. Continued as the following. The Journal of Psychological Medicine. Quarterly. New York. Vols. IV.-VI. 1870-72. 8vo. Continuation of the preceding. In July, 1874, the publication was resumed as The Psychological and Medico-Legal Journal. The Medical Gazette. Weekly. Edited by A. L. Carroll and others. New York. Vols. I.-VI., and Nos. 1-6. Vol. III. 1867-71. 4to. Revista médico quirúrgica y dentística de los Sres. Wilson y Gonzales. Quarterly. Nueva York. Nos. 1-3. Tom I. 1868. 8vo. The Physician and Pharmacist. Quarterly. Edited by G. J. Fisher and others. New York. Vols. I.-III. 1868-71. 4to. Continued as the following. The Physician and Pharmacist.

Quarterly. New York. Vols. IV.-XI. 1871-78. 4to. Current. Continuation of the preceding. The American Journal of Obstetrics and Diseases of Women and Children. Quarterly. Edited by E. Noeggerath, B. F. Dawson, and others. New York. Vols. I.-XI. 1868-78. 8vo. Current. The Archives of Ophthalmology and Otology. Semi-Annual. Edited and published simultaneously in English and German by H. Knapp, in New York, and S. Moos, in Heidelberg. New York. Vols. I.-VII. 1869-78. 8vo. Current. Vol. IV became quarterly. The American Journal of Syphilography and Dermatology. Quarterly. Edited by M. H. Henry. New York. Vols. I.-V. 1870-74. 8vo. The Medical World. Monthly. Edited by R. A. Vance. New York. One Volume. 1871-72. 8vo. Archives of Scientific and Practical Medicine and Surgery. Monthly. Edited by C. E. Brown-Séquard and E. C. Seguin. New York. Nos. 1-5. Vol. I. 1873. Royal 8vo. The Sanitarian. Monthly. Edited by A. N. Bell and others. New York. Vols. I.-VI. 1873-78. 8vo. Current. Archives of Electrology and Neurology. Semi-Annual. Edited by G. M. Beard. New York. Two volumes. 1874-75. 8vo. The Psychological and Medico-Legal Journal. Monthly. Conducted by W. A. Hammond and T. M. B. Cross. New York. New Series. Vols. I.-III. 1874-76. 8vo. For First Series see The Quarterly Journal of Psychological Medicine. Vol. III. 1875-76, title, The American Psychological Journal. Quarterly. Conducted by Allan McLane and others. Archives of Dermatology. Quarterly. Edited by L. D. Bulkley. New York. Vols. I.-IV. 1874-78. 8vo. Current. Proceedings of the Medical Society of the County of Kings. Monthly. Conducted by the Council of the Society. Brooklyn. Vols. I.-III. 1876-78. 8vo. Current. Archives of Clinical Surgery. Monthly. Edited by E. J. Bermingham. New York. Vol. I. 1876-77. 8vo. In October, 1877, united with the following, forming the Hospital Gazette and Archives of Clinical Surgery. The Hospital Gazette. Monthly. Edited by F. A. Lyons. New York. Nos. 1-6. Vol. I. 1877. 4to. In October, 1877, united with the preceding, forming the following. The Hospital Gazette and Archives of Clinical Surgery. Semi-Monthly. Edited by E. J. Bermingham and F. A. Lyons. New York. Four volumes. Whole series. 1876-78. 8vo. Revista mensual medico-quirurgica de Nueva York. A. de Tejada, Editor. Nueva York. No. 1, Vol. I. October, 1878. 8vo. Current. The New York Medical and Surgical Brief. Monthly. E. J. Fisk, Editor. New York. No. 1, Vol. I. November, 1878. 8vo. Current.

NORTH CAROLINA.—The Medical Journal of North Carolina. Bi-Monthly. E. Warren, Editor. Edenton and Raleigh. Four volumes. 1858-61. 8vo. The North Carolina Medical Journal. Monthly. M. J. DeForrest and Thomas F. Wood, Editors. Raleigh. Vols. I.-II. 1878. 8vo. Current. The same was running title of preceding.

OHIO.—The Western Quarterly Reporter of Medical, Surgical, and Natural Science. Edited by J. D. Godman. Cincinnati. Vols. I.-II. 1822-23. Ohio (The) Medical Repository of Original and Selected Essays and Intelligence. Bi-Monthly. Edited by G. W. Wright and J. M. Mason. Cincinnati. Vol. I. 1826-27. Folio. Completed. Merged into the following in April, 1827. Western (The) Medical and Physical Journal. Original and eclectic. Monthly. Edited by Daniel Drake and Guy W. Wright. Cincinnati. Vol. I. 1827-28. No. 1, Vol. II. May, 1828. 8vo. No. 1, Vol. II., believed to be the last published. In April, 1828, the Western Journal of the Medical and Physical Sciences was commenced by Daniel Drake, and was subsequently represented and regarded as continuation of the above, the volume for April, 1828, to March, 1829, being reckoned Vol. II. of the periodical. Western (The) Journal of the Medical and Physical Sciences. Monthly. Edited by Daniel Drake. Cincinnati. Vols. II.-XII. 1828-38. 8vo. No. 1, Vol. XII. believed to be the last published. For Vol. I. see preceding. In 1835, The Western Medical Gazette merged in this journal, January 1, 1840, revived and consolidated with the Louisville Journal of Medicine and Surgery, forming Western (The) Medical Gazette. Semi-Monthly. Edited by Eberle and others. Vols. I.-II. 1832-35. 8vo. Completed. Suspended from September 1, 1833, to February 1, 1834. In 1835 merged into the preceding. Ohio (The) Medical Repository. Monthly. Edited by J. M. Mason. Cincinnati, Nos. 1-5, Vol. I. 1835-36. 8vo. Western (The) Quarterly Journal of Practical Medicine. Edited by John Eberle and others. No. 1, Vol. I. June, 1837. Cincinnati. 8vo. No more published. Western (The) Lancet. Devoted to medical and surgical science. Monthly. Vols. I.-XVIII. Cincinnati and Lexington, 1842-1857. After April, 1843. The Western and

Surgical Medical Recorder merged in this journal. In January, 1858, united with The Cincinnati Medical Observer, forming the Cincinnati Lancet and Observer. Ohio (The) Medical and Surgical Journal. Bi-Monthly. Edited by John Butterfield. Columbus. Vols. I.-XVI. 1848-64. 8vo. Completed. American (The) Psychological Journal. Devoted chiefly to the elucidation of mental pathology and the medical jurisprudence of insanity. Bi-Monthly. Conducted by Edward Mead, Cincinnati. One volume. 1853. 8vo. Completed. Prospectus for a new series to be published in Boston issued in 1874. Medical (The) Counsellor. A weekly gazette of the medical and physical sciences. R. Hills, Editor. Columbus, Ohio. Vols. I.-II. 1855-56. 8vo. Completed. The Ohio Medical Gazette was running title of this journal. Cincinnati (The) Medical Observer. Edited by G. Mendenhall, J. A. Murphy, and E. B. Stevens. Monthly. Vols. I.-II. 1856-57. 8vo. In January, 1858, united with The Western Lancet, forming the Cincinnati Lancet and Observer. Cincinnati (The) Medical News. Devoted to the dissemination of truth. Edited by A. H. Baker. Monthly. Vol. I, Nos. 1 and 2. Vol. II, August 15, 1858, November 15, 1859. Folio. Continued as the Cincinnati Medical and Surgical News. Belmont (The) Medical Journal. A monthly periodical published under the patronage of the Belmont Medical Society. Bridgeport, Ohio. Two volumes. 1858-60. 12mo. Completed. Cincinnati (The) Lancet and Observer. Edited by G. Mendenhall, J. Murphy, and E. B. Stevens. Monthly. Vols. I.-XXI. 1858-78. 8vo. Completed. Formed by consolidation of the Cincinnati Medical Observer with the Western Lancet. Consolidated with The Clinic, forming the Cincinnati Lancet and Clinic. Cleveland (The) Medical Gazette. A monthly journal for the advancement and review of the Medical Sciences. Edited by G. C. E. Weber. Vols. I.-III. 1859-61. 8vo. At end of Vol. I, consolidated with Cincinnati Lancet and Observer, but each journal retained its own name, and they were issued simultaneously. Columbus (The) Review of Medicine and Surgery. Edited by W. L. McMillen. Bi-Monthly. Nos. 1-5. Vol. I. August, 1860, to April, 1861. 8vo. Completed. Cincinnati (The) Medical and Surgical News. Edited by A. H. Baker. Monthly. Four volumes. 1860-63. 8vo. Completed. Continuation of the Cincinnati Medical News. Cincinnati (The) Journal of Medicine. Edited by G. C. Blackman, T. Parvin, and R. Bartholow. Monthly. Vols. I.-IV. Cincinnati, Ohio, and Indianapolis. 1866-69. 8vo. After No. 6 of Vol. II, title, The Western Journal of Medicine. For continuation see The American Practitioner. Cincinnati (The) Medical Repertory. Edited by J. A. Thacker. Monthly. Vols. I.-IV. 1868-71. 8vo. For continuation see The Cincinnati Medical News. Clinic (The). Edited by J. T. Whittaker. Weekly. Cincinnati. Fourteen volumes. 1871-78. 4to. Completed. Merged in Cincinnati Lancet and Clinic, July 1, 1878. Cincinnati (The) Medical News. Edited by J. A. Thacker and others. Monthly. Vols. I.-VII. 1872-78. 8vo. Continuation of The Cincinnati Medical Repertory. Ohio (The) Medical and Surgical Journal. Edited by J. H. Pooley. Bi-Monthly. New Series. Columbus. Vols. I.-III. 1876-78. 8vo. Ohio (The) Medical Recorder. Edited by J. W. Hamilton and J. F. Baldwin. Monthly. Columbus. Vols. I.-II. 1876-78. 8vo. Toledo Medical and Surgical Journal. Edited by J. Priest. Monthly. Vols. I.-II. 1877-78. 8vo. Cincinnati Lancet and Clinic. Weekly. J. C. Culbertson and J. G. Hyndman, Editors. No. 1. July 6, 1878. 8vo. Current. Formed by consolidation of The Clinic with The Cincinnati Lancet and Observer. The Obstetric Gazette. Monthly. E. B. Stevens, Editor. Vol. I. 1878. Cincinnati. 8vo.

OREGON. — The Oregon Medical and Surgical Reporter. Monthly. Edited by E. R. Fiske and H. Carpenter. Salem. Two volumes. 8vo. Completed. The Oregon Medical Journal. A quarterly journal of medicine and surgery. Published by the Marion Company Medical Society. Salem. Nos. 1-4. Vol. I. 1876-77. 8vo.

PENNSYLVANIA. — The Philadelphia Medical and Physical Journal. Quarterly. Collected and arranged by Benjamin Smith Barton. Vols. I.-III. 1804-09. 8vo. The Philadelphia Medical Museum. Quarterly. Conducted by John Redman Coxe. Seven volumes. 1804-11. 8vo. Completed. A subdivision of each number, entitled Medical and Philosophical Register, is, after Vol. II, pagged separately. The Eclectic Repertory and Analytical Review. Medical and philosophical. Quarterly. Philadelphia. Vols. I.-X. 1811-20. 8vo. For continuation see Journal of Foreign Medicine. The Journal of Foreign Medical Science and Literature. A continuation of the Eclectic Repertory. Quarterly.

Conducted by S. Emlen, Jr., and William Price. Vols. I.-IV. 1821-24. Philadelphia 8vo. The American Medical Recorder. Quarterly. Philadelphia. Vols. I.-XV. 1818-29. 8vo. Completed. Merged in the American Journal of the Medical Science, after No. 2, Vol. XV. Vols. VII.-XII., title, The Medical Recorder, etc. The Philadelphia Journal of Medical and Physical Sciences. Quarterly. Supported by an association of physicians, and edited by N. Chapman, W. P. Dewees, J. D. Goodman, and Isaac Hays. Fourteen volumes. 1820-27. 8vo. Continued as the American Journal of the Medical Sciences. The American Journal of Medical Science. Quarterly. Edited by Isaac Hays. Philadelphia. One hundred and two volumes. 1827-78. 8vo. The Æsculapian Register. Weekly. Edited by several physicians. Philadelphia. Vol. I. June 17 to December 9, 1824. 8vo. The Medical Review and Analectic Journal. Quarterly. Conducted by John Eberle and George McClellan. Philadelphia. Three volumes. 1824-26. 8vo. Completed Vols. II.-III., title, The American Medical Review and Journal of Original and Selected Papers in Medicine and Surgery. North American Medical and Surgical Journal. Quarterly. Conducted by H. L. Hodge and others. Philadelphia. Vols. I.-XII. 1826-31. 8vo. Completed. The Philadelphia Monthly Journal of Medicine and Surgery. Edited by N. R. Smith. Vol. I. and Nos. 1-3, Vol. II. 1827-28. 8vo. After February, 1828, merged in The American Journal of the Medical Science. The Monthly Journal of Foreign Medicine. Edited by S. Littell. Philadelphia. Vols. I.-III. 1828-29. 8vo. The Cholera Gazette. Weekly. Philadelphia. Nos. 1-16. Vol. I. July 11. No. 21, 1832. The American Lancet. Bi-Weekly. Edited by F. S. Beattie. Philadelphia. Nos. 1-7. Vol. I. 1833. American Cyclopædia of Practical Medicine and Surgery. A digest of medical literature. Philadelphia. Two volumes. 1834-36. 8vo. The American Medical Library and Intelligencer. A concentrated record of medical science and literature. Edited by G. S. Pattison and R. Dunglison. Philadelphia. Specimen sheet November, 1836. Continued as The American Medical Intelligencer. The Eclectic Journal of Medicine. Monthly. Edited by John Bell. Philadelphia. Vols. I.-IV. 1836-40. 8vo. The American Medical Intelligencer. A concentrated record of medical science and literature. Semi-Monthly and Monthly. Edited by Robley Dunglison. Philadelphia. Five volumes. 1837-42. 8vo. Continued as the Medical News and Library. Medical News and Library. Monthly. Philadelphia. Thirty-six volumes. 1843-78. 8vo. Current. A continuation of the preceding. The Medical Examiner. Bi-Weekly and Monthly. Edited by J. B. Biddle, M. Clymer, and W. W. Gerhard. Philadelphia. Vols. I.-VII. 1838-44. Royal 8vo. Vols. I.-XII. New Series. 1845-56. 8vo. In January, 1857, united with The Louisville Review, forming The North American Medico-Chirurgical Review. The Bulletin of Medical Sciences. Monthly. Edited by John Bell. Philadelphia. Four volumes. 1843-46. 8vo. Completed. Nordamerikanischer Monatsbericht für Natur und Heilkunde. Philadelphia. Four volumes. 1850-52. 8vo. The Philadelphia Medical and Surgical Journal. Semi-Monthly. Edited by James Bryan. Vols. I.-VI. 1853-58. 8vo. The Medical Reporter. A quarterly journal, published under the direction of the Chester and Delaware County Medical Societies. West Chester, Pennsylvania. Vols. I.-III. 1853-56. 8vo. The North American Medico-Chirurgical Review. Edited by S. D. Gross and T. G. Richardson. Bi-Monthly. Philadelphia. Vols. I.-V. 1857-61. 8vo. Completed, formed by consolidation of The Medical Examiner, Philadelphia, and the Louisville Review. The Medical and Surgical Reporter. A weekly journal. Edited by S. W. Butler and R. J. Levis. Philadelphia. Vols. I.-XXXIX. 1858-78. 8vo. Compendium of Medical Science. Half-Yearly. Edited by S. W. Butler, D. G. Brinton, and G. H. Napheys. Philadelphia. Eleven volumes. 1868-78. 8vo. The Photographic Review of Medicine and Surgery. A bi-monthly illustration of interesting cases, accompanied by notes. Edited by F. F. Maury and L. A. Duhring. Philadelphia. Two volumes. 1870-72. 8vo. Completed. The Medical Times. A semi-monthly journal of medical and surgical science. Edited by J. H. Hutchinson and J. Tyson. Philadelphia. Two volumes. 1870-72. Royal 8vo. Continued as the following. The Philadelphia Medical Times. A weekly journal of medical and surgical science. Philadelphia. Vols. III.-VII. 1872-1878. 8vo. Current. See The Medical Times, for Vols. I.-II. Vol. VI. became bi-weekly. The Medical Cosmos. A monthly abstract of medical science and art. G. J. Zeigler, Editor. Vol. I. Nos. 1-5. Vol. II. Philadelphia. 1871-72. 8vo. The Obstetrical Journal of Great Britain and Ireland: including midwifery and the diseases of women

and children. Monthly. Edited by J. H. Aveling and A. Wiltshire. With an American supplement, edited by Wm. F. Jenks. Philadelphia. Vols. I.-VI. 1873-78. 8vo. The Monthly Abstract of Medical Science. Philadelphia. Vols. I.-V. 1874-78. 8vo.

SOUTH CAROLINA.—Charleston Medical Register. Annual, by David Ramsay. 1802. The Carolina Journal of Medicine, Science, and Agriculture. Quarterly. Conducted by T. Y. Simons and W. Michel. Charleston. Vol. I. 1825. 8vo. The Southern Journal of Medicine and Pharmacy. Bi-Monthly. Edited by J. L. Smith and S. D. Sinkler. Charleston. Vols. I.-II. 1846-47. 8vo. Continued as the following. The Charleston Medical Journal and Review. Bi-Monthly. Edited by P. C. Gaillard and H. W. De Saussure. Charleston. Vols. III.-XV. 1848-60. 8vo. Continuation of the preceding. The Charleston Medical Journal and Review. Quarterly. New Series. Edited by F. P. Porcher and R. A. Kinloch. Charleston. Vols. I.-IV. 1873-77. 8vo.

TENNESSEE.—The East Tennessee Record of Medicine and Surgery. Quarterly. Edited by F. A. Ramsey. Knoxville. 1 Vol. 1852-53. 8vo. After May, 1853, merged in The Southern Journal of the Medical and Physical Sciences. The Memphis Medical Recorder. Bi-Monthly. Edited by A. P. Merrill, C. T. Quintard, and others. Memphis. Vols. I.-VI. 1852-58. 8vo. The Southern Journal of the Medical and Physical Sciences. Bi-Monthly. Conducted by J. W. King and W. P. Jones. Nashville and Knoxville. Vols. I.-VI. 1853-57. 8vo. In 1853, The East Tennessee Record of Medicine and Surgery merged in this Journal. In December No., 1857, The East Tennessee Medical Times announced as a continuation. The East Tennessee Medical Times. Announced by R. O. Currey in 1857, to be issued monthly as a continuation of the Southern Journal of the Medical and Physical Sciences, but never appeared, so far as I can learn. The Nashville Monthly Record of Medical and Physical Science. Edited by D. F. Wright, R. O. Currey, and others. Vols. I.-II., and Nos. 1, 2, Vol. III. 1858-60. 8vo. The Medical and Surgical Monthly. Edited by F. A. Ramsey. Memphis. Nos. 1-6, Vol. I., 1866. 8vo. The Nashville Journal of Medicine and Surgery. Bi-monthly and monthly. Edited by W. K. Bowling, P. F. Eve, and others. Nashville. Vols. I.-XXI. 1851-61. New Series, Vols. I.-XXI. 1866-78. 8vo. Current. Vol. II., became monthly.

TEXAS.—The Galveston Medical Journal. Monthly. Greenville Dowell, Editor. Galveston. 5 vols. 1866-71. 8vo. The Texas Medical Journal. Monthly. Edited by J. D. Rankin. Galveston. Nos. 1-7, 10, Vol. I.; Nos. 2, 9, Vol. II.; Nos. 1, 2, 4, Vol. III.; Vols. V.-VII. 1873-78. 8vo. Current. Vol. III., became quarterly.

VERMONT.—Vermont Medical Journal. Bi-Monthly. J. M. Currier, Editor. Burlington. Nos. 1, 2, Vol. I. 1874. 8vo.

VIRGINIA.—The Stethoscope and Virginia Medical Gazette. Monthly. Edited by T. P. Atkinson, R. W. Haxall, and others. Richmond. Vols. I.-V. 1851-55. 8vo. Vols. IV.-V.; title, The Stethoscope. In January, 1856, united with The Virginia Medical and Surgical Journal, forming The Virginia Medical Journal. The Monthly Stethoscope and Medical Reporter. Edited by G. A. Wilson and R. A. Lewis. Richmond. Vol. I. Nos. 1-5, Vol. II. 1856-57. 8vo. The Virginia Medical and Surgical Journal. Monthly. Edited by G. A. Otis, and others. Richmond. Vols. I.-V. 1853-55. 8vo. Continued as the following. The Virginia Medical Journal. Monthly. Richmond. Vols. VI.-XIII. 1856-59. 8vo. Formed by the union of The Stethoscope with the Virginia Medical and Surgical Journal. Continued as the following. The Maryland and Virginia Medical Journal. Monthly. Richmond. Vols. XIV.-XVI. 1860-61. 8vo. Continuation of the preceding. The Confederate States Medical and Surgical Journal. Published under the auspices of the Surgeon-General C. S. A. Monthly. Vol. I. Nos. 1, 2, of Vol. II. January, 1864, to February, 1865. 4to. The Richmond Medical Journal. Monthly. Edited by E. S. Gaillard and W. S. McChesney. Richmond. Vols. I.-V. 1866-68. 8vo. Continued. The Richmond and Louisville Medical Journal, *q. v.* The Virginia Clinical Record. Monthly. Edited by J. S. Dorsey Cullen. Richmond. Vols. I.-III. 1871-74. 8vo. Virginia Medical Monthly. L. B. Edwards, Editor. Richmond. Vols. I.-V. 1874-78. 8vo. Current. The Southern Clinic. Monthly. Edited by C. A. Bryce and J. R. Wheat. Richmond. No. I., Vol. I., October, 1878. 8vo. Current.

WEST VIRGINIA.—The West Virginia Medical Student. Monthly. J. E. Reeves, Editor. Wheeling. Vol. I. 1875-76. 8vo.

The following table shows by countries the number of medical journals and transactions received at the library of the surgeon-general's office and regularly indexed. This list does not include pharmaceutical, chemical, dental, veterinary, homœopathic, hydropathic, eclectic, or popular journal.

Countries.	Journals.	Trans- actions.	
United States	57	60	
Mexico	2	—	
South America {	Argentine Confederation	1	—
	Brazil	4	—
	Chili	1	—
	Venezuela	1	—
Great Britain and Colonies	36	37	
France	64	29	
Germany	96	38	
Belgium	10	12	
Netherlands	7	5	
Spain	21	1	
Portugal	3	—	
Italy	35	4	
Switzerland	5	5	
Russia	10	4	
Sweden and Norway	6	2	
Denmark	4	—	
Turkey	2	—	
China	1	1	
Poland	6	3	
Total	372	201	

There are now in existence the following medical journals of equal or greater age than the Boston Medical and Surgical Journal, and a study of the causes why these have survived so long would be a valuable contribution to the literature of journalism, but this study cannot be undertaken here.

The Philadelphia Journal of the Medical and Physical Sciences. Philadelphia. 1820-27.

The American Journal of the Medical Sciences. Philadelphia. 1820-78.

Annales d'Hygiène publique et de Médecine légale. Paris. 1829-78.

Annali universali di Medicina. Milano. 1817-78.

Archives générales de Médecine. Paris. 1823-78.

Bibliothek for Læger. Kjöbenhavn. 1821-78.

Bullettino delle Scienze mediche, pubblicato per cura della Società medico-chirurgica di Bologna. 1829-78.

Gazette de Santé, contenant les nouvelles Découvertes sur les Moyens de se bien porter, et de guérir quand on est malade. Paris. 1773-1829. Gazette de Médecine de Paris; journal de Médecine et des Sciences accessoires. Paris. 1773-1878.

The Edinburgh Medical and Surgical Journal. Edinburgh. 1805-55. The Edinburgh Medical Journal; combining the Monthly Journal of Medicine with the Edinburgh Medical and Surgical Journal. Edinburgh. 1805-78.

Gemeinsame deutsche Zeitschrift für Geburtskunde. Weimar. 1826-32. Neue Zeitschrift für Geburtskunde. Berlin. 1834-52. Monatsschrift für Geburtskunde und Frauenkrankheiten. Berlin. 1853-69. Archiv für Gynækologie. Berlin. 1826-78.

Journal de Chimie médicale, de Pharmacie et de Toxicologie. Paris. 1825-78.

Recueil périodique de la Société de Santé de Paris. (1797.) 2d ed. Recueil périodique

de la Société de Médecine de Paris. 1797-1802. Journal général de Médecine, Chirurgie, et de Pharmacie, ou recueil périodique de la Société de Médecine de Paris. 1802-30. Transactions médicales; Journal de médecine pratique et de Littérature médicale, dans lequel sont publiés les Actes de la Société de Médecine de Paris. 1830-33. Revue médicale française et étrangère. Paris. 1797-1878.

Journal de Médecine, de Chirurgie, et de Pharmacie militaires. Paris. 1815-16. Recueil de Mémoires de Médecine, de Chirurgie, et de Pharmacie militaires, faisant suite au journal qui paraissait sous le même titre. Paris. 1815-78.

The Lancet. A Journal of British and Foreign Medical and Chemical Science, Criticism, Literature, and News. London. 1823-78.

The London Medical Gazette; a Weekly Journal of Medicine and the Collateral Sciences. London. 1827-51. The Medical Times and Gazette. A Journal of Medical Science, Literature, Criticism, and News. London. 1827-78.

Pamiętnik Lekarski Warszawski. Warszawa. 1828-29. Pamiętnik Towarzystwa Lekarskiego Warszawskiego. Warszawa. 1828-78.

Voyenno-meditsinskii Journal, isdavayemwi Meditsinskim Departamentom Voyenno ministerstva. St. Petersburg. 1823-78.

Kritisches Repertorium für die gesammte Heilkunde. Berlin. 1823-33. Wochenschrift für die gesammte Heilkunde. Berlin. 1833-51. Vierteljahrsschrift für gerichtliche und öffentliche Medicin. Berlin. 1852-71. Vierteljahrsschrift für gerichtliche Medicin und öffentliches Sanitätswesen. Berlin. 1823-78.

Reil's Archiv für die Physiologie. Halle. 1796-1815. Deutsches Archiv für die Physiologie. Halle. 1815-23. Archiv für Anatomie und Physiologie. Leipzig. 1826-32. Archiv für Anatomie, Physiologie, und Wissenschaftliche Medicin. Leipzig. 1834-76. Archiv für Anatomie und Physiologie. Leipzig. 1796-1878.

REPORT ON MALPRACTICE.¹

BY EUGENE F. SANGER, A. M., M. D., OF BANGOR.

THE aphorism that the burnt child dreads the fire applies with peculiar force to those of our profession who have had any experience with civil malpractice suits. The laws of our State permit the patient to sue the doctor at a nominal price, without any guaranty for costs, sufficient cause, or good faith; they virtually leave us at the mercy of the legal profession, who, under the pretext of malpractice, plunder the very men who give aid and comfort to the sick in times of need, without money and without price.

The common rumseller, against whom a special law exists on our statute books, has the protection of his patrons, which the surgeon does not enjoy, as the law on malpractice actually induces the patient to pounce upon his physician like a thief at night, and rob him of his good name, his property, and his means of doing good, though it may not in any way profit the patient.

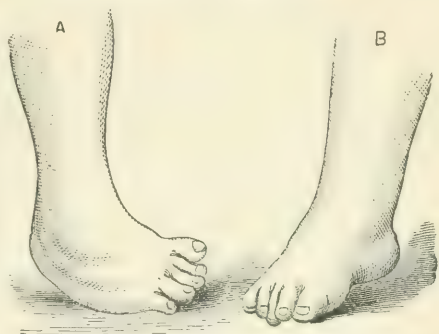
I propose as my text my own experience, — an experience which applies to the medical profession alone, as the other professions and sciences are based upon laws and principles of right and accountability which the doctor knows not of, unless it may be the *right* of the irresponsible patient wantonly to sue the doctor without vouchers for

¹ A paper read before the Maine Medical Association, June 12, 1878.

costs and consequences, and the *accountability* of the doctor to relieve and restore all human ills and injuries which come under his observation. During the past few months I have wasted one whole month of my time in the court-house, and been put to more than \$2000 expense, to defend two of the simplest acts of surgery, for which I received ninety cents pay.

The first case, *Harriman v. Sanger*, was a case of congenital club-feet, or talipes equino-varus, in a child twelve months old, spastic or spasmodic in character, as is usual in this species of deformity. The operation was tenotomy of the tendo Achillis, or heel cord, and the use of the improved Scarpa shoe, with instructions to report from time to time, which the parents did not do. Six months afterwards, I voluntarily visited the child; found it running around, doing well, and furnished a second pair of shoes. Receiving pay neither for the shoes nor the operation, I discontinued my services until reimbursed.

I was sued for \$7000 because I cut the *sheath* of the tendon in tenotomy of the tendo Achillis, spilt a *few drops of blood*, discontinued my visits, and used the improved Scarpa shoe! The prosecution claimed that I should have adopted the Barwell and Sayre theory of paralysis of the peroneal muscles, used Sayre's shoe with rubber tubing, electricity, and made repeated visits. The parents and a jail-bird swore to the existence of paralysis, and three surgeons to the paralytic theory and treatment, but paralyzed their own evidence by admitting a total want of experience in the Sayre system, rubber tubing, electricity, and repeated visits.



A. Condition of the feet May, 1871, at the time when I cut the heel cords and adjusted the improved Scarpa shoes. B. Condition of the feet November, 1871, when I dismissed the case because the parents did not reimburse me for money paid out. The posterior tibial tendon and plantar fascia still needed to be cut, to prevent a relapse and perfect a cure, which the parents neglected to have done, and sued me for *their* neglect five years afterwards.

Dr. Jewell, my assistant, the only surgeon who ever examined the child from birth to the time of the suit, testified to contraction of the heel cord, and to a skillful and successful operation. Paralysis of the peronei was not demonstrated at the trial. The Sayre shoe had not been used in the Massachusetts General Hospital, or Maine, prior to my operation, and the leading orthopædic authors, as Adams, Little, Brodhurst, Stromeyer, Guersant, Knight, Buckminster Brown, etc., did not sustain the Sayre theory. Crosby, of New York, Tewksbury, Hill, and Robbins, of this State, endorsed my treatment.

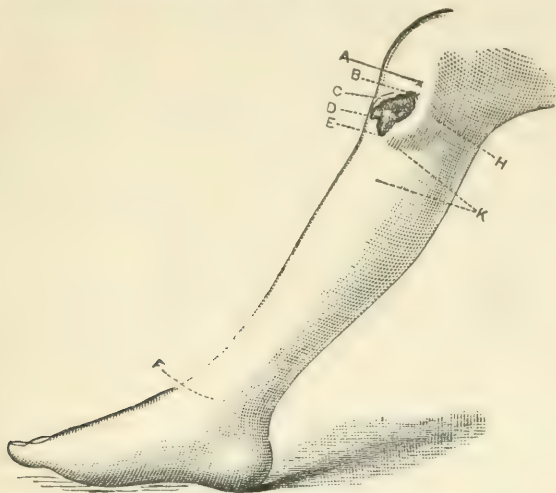
October 11, 1876, a month later, I was sued again for \$12,000, which swelled the attachments to \$19,000 on what little property I had. My bank account was trustee'd, which forced a bond from me to get a voice in the management of my private affairs. My second case, *Bowley v. Sanger*, was more frivolous, and yet more prolific in trouble and expense, as it was the last dying struggle of a conspired effort at my pocket. The first jury disagreed.

A scrofulous disease of the knee-joint, of many years' standing, had been aggravated by a blow from a stick of wood on the shin bone, below the tuberosity and back of the tubercle of the tibia, causing a diffuse abscess under the seat of the blow. The blow was received April, 1876, and the leg had been treated three or four months by three other physicians, without improvement, the last of whom had imperfectly lanced it over the knee-joint instead of at a more dependent part. The result was burrowing, infiltration, acrid pus, an imperfectly drained cavity, erysipelas, and danger of pyæmia. I was called August 12th, about a fortnight after the abscess had been lanced, and with the assistance of Dr. Weston, a surgeon of experience, slit open the abscess downwards, on a grooved director, cutting through the skin and fascia only, and introduced a cotton tent into a sinus which extended backwards from the bottom of the abscess towards the calf. The incision was forked at the lower end. I was dismissed twelve days afterwards, August 23, 1876, and was not permitted to see the leg again for fourteen months, until the day before it was amputated, November 5, 1877, for scrofulous disease of the knee-joint, commonly called white swelling. During this interval the knee had been treated with salves, poultices, and lotions only, and the patient with white swelling was permitted to run at large without even a splint to support the joint.

The next week after I was dismissed, a photograph was taken by Marston, at the attending surgeon's request, and, as Marston testified, an exaggerated view, to please the surgeon, who used very abusive language against me. I had cut out a piece of sound flesh, opened the knee-joint, let out the joint-water, and ruined the knee. It was a case of malpractice, and I could be made to pay. The writ alleged, in substance, the same.

Dr. Weston, my assistant, and the boarding master, an ignorant fellow, by name of Michael Finnegan, were the only persons present during the laying open and dressing of this abscess. Dr. Weston and I swore that not a particle of flesh was cut out. Finnegan swore that we cut out a piece two by three and one half inches, as you would cut the rot out of an apple, and flipped it into the wash-bowl. The photograph was used to sustain Finnegan, and the plaintiff's surgeons testified that it showed the loss of flesh and injury to the capsular

ligament of the knee; they believed a piece of flesh had been cut out because Finnegan said so. No photograph was taken the following winter, when my cut had entirely healed up, and no one ever saw the piece of flesh claimed to have been cut out.



A. Knee-joint. B. Point over the abscess where my predecessor made an opening, which was too small to discharge the matter, burrowing in the direction of D, E, K, and H; at K the leg was badly infiltrated and swollen; I extended his cut from B to D, and from C to E, and stretched the wound open with lint, as seen in the figure. Abscess improved rapidly. There still existed scrofulous inflammation of the head of the bone, which I proposed to trephine between B and C in a few days and save the joint, as I had done in similar cases, but was prevented by a suit for malpractice.

To disprove the cutting out of *any* flesh we took *their own* photograph, measured the width of the cut, which was one fourth of an inch, the length of the shin bone, which was four inches, and the estimated length of Bowley's shin bone, which was fourteen inches, and proved that the wound was not over seven eighths of an inch wide, which was less than the ordinary gaping of a simple incision three inches long. By measuring the width of the leg on the photograph, which was a little over one and a quarter inches, we proved that if the wound represented two inches of lost flesh, without allowing for gaping, Bowley was a monster twelve feet tall, with a leg as large as an elephant's, thirty-three inches around the calf. We proved that Bowley had been lame for years, and Dr. Folsom, his family physician, was threatened with a like suit, because he advised the attorney not to prosecute the Bowley suit, as it was an incurable case of white swelling of years' duration. We proved that Bowley said he had a "soft thing" on Sanger, the doctor said so; he meant to have some money; the cut did not amount to much.

The dissection of the leg by Dr. Bright, in the presence of Drs.

Jones, Morison, and Simmons, and the expert testimony of Drs. Hill, Tewksbury, Bates, Manson, Huckins, Shepard, Briggs, Bradbury, Coe, Preble, etc., all went to prove a case of caries of the bones of the joint, that Dr. Sanger did not injure or cut into the joint, but that his operation was good surgical treatment, and, after Dr. Sanger was dismissed, that an essential element of treatment to save the leg had been neglected, such as rest by the use of splints, extension, and the removal of diseased bone by drilling, trephining, excision, etc.

These two cases illustrate the extreme peril and danger, to the physician and surgeon, of civil malpractice suits. They illustrate the dangers from jealous rivals, tricky lawyers, impecunious and ignorant patients, from family conspiracies, and from the unholy alliance of the sachel and scalpel. They illustrate the dangers of successful operations on neglectful and designing patients, and of operations made to appear unsuccessful by wicked doctors, and of dangers which do not cease until the grave has closed over our mortal remains, and the administrator has settled up our estates.

The risks and temptations of malpractice suits are inconceivably great. The industrious, faithful, and thrifty doctor seems to be the legitimate victim of the lame, the blind, and the halt. The body must be made whole, whether from accidental injuries or constitutional diseases. As the broken-down merchant and speculator rushes to the faro bank and last bonanza to retrieve his broken fortunes, so the diseased and deformed use their calamities to gamble away the doctor's substance, forgetting that his patient care has saved whatever of life and limb they possess, and eager to kill the goose that laid the golden egg.

The doctor becomes the sacrificial offering of the ills to which flesh is heir, as well as the scape-goat of every willful violation of established physical laws. He must restore whatever he undertakes to repair. The artisan does not pretend to restore worn-out material, because he cannot create the material which he uses; so the surgeon, in patching the human body, cannot create the vital principles of assimilation and innervation, absorption and secretion, reproduction and decay, sensation and motion, contraction and reflex action. He may modify the functions and direct the forces of the body to a limited extent, but he has in the main to depend upon the "*vis medicatrix nature*."

Even nature cannot reproduce lost substances equal in structure, beauty, and usefulness to the original tissues, and some cannot be reproduced at all; much less can the physician and surgeon save life or prevent deformity. Every disease has its uniform per cent. of deaths, and every fracture and morbid growth its per cent. of shortening and deformity, which all the malpractice suits in the world cannot alter. We cannot apply the square and compass to the human frame. We

cannot be unerring in our judgment or avoid mistakes, because the varying factors of disease, diathesis, inheritance, and vocation are too numerous to admit of fixed conclusions or uniform action.

The irresponsible quack must surely displace the experienced and responsible surgeon, if patients claim the right to compel the doctor to defend himself against irresponsible attacks at his own expense, and test the surgeon's knowledge of the general principles of surgery and his skill in every operation by a suit at law. Unless the law which enables worthless patients, by simply paying the price of a writ, to keep the surgeon constantly under the charge of the sheriff or at the mercy of lawyers is abolished, we must step down and out.

I have collected, within the past month, a few of the threatened and instituted malpractice suits in our State. You will be startled with the number, and vow you will abandon the practice. You will thank a kind Providence for an exemption, and curse the legal facilities for ruining and blowing your profession to atoms, without the benefit of the clergy, at the behest of any worthless patient or misguided and unscrupulous lawyer.

I escaped prosecution for twenty-three years of hospital and private, civil and military, practice, but when the tornado struck it shook me from stem to stern; it made my hair stand on end and my voice stick in my throat. I did not literally lose a year's growth, but I lost more than a year of study and practice, from mental solicitude, which dwarfs body and mind.

There are about six hundred regular physicians in this State. During the short space of one month I received communications from one hundred and fourteen of them, from which I have collected seventy malpractice suits, fifty-five threatened suits, and fifty-eight exemptions. The latter were largely young physicians, or possessed but little available property. Not more than three or four who had been blackmailed responded, though I am knowing to quite a large number of such cases. Of those reported, only fifty-eight, or less than thirty-three per cent., escaped prosecution, threats, or the payment of smart money. The inference is that pride and fear of injury to reputation deterred a great many from answering my circular, and if we had received a full report we could show that hardly a practitioner of medicine, of experience and property, gets through with his professional career without some such infliction. All my cases are within the knowledge of the present generation.

Of the seventy who were sued for damages, ranging from \$1000 to \$25,000, six paid from \$100 to \$350 rather than be dragged into the court-house; three paid from \$25 to \$350, after one or more trials, rather than be kept there perpetually; and nine were cast in damages from \$103 to \$2000. The nine plaintiffs who settled, eight of the

nine who were awarded damages, and all but eight of those whose suits failed, were poor or worthless. Out of seventy prosecutions, the plaintiffs in sixty-one of them were unable to pay taxable costs, and very many were shiftless and dissipated. Only one in eight got a verdict. The nine who were paid something prior to a trial, or after one or more disagreements, aggregated only \$1950, but, as one tried his case six times, and two others twice each, and as none of the plaintiffs were able to pay taxable costs, it is probable that expenses absorbed the whole amount. The nine who got verdicts, amounting to \$5253, had long, repeated, and expensive suits, so that not over \$2000 remained for distribution. I doubt whether the patients received much of that, in view of the chances which the lawyers took of getting their pay by stripping our profession.

These suits for malpractice were brought for the following causes : Two for fracture of the thigh within the capsule of the joint, eight for fracture of the thigh, eighteen for fracture of the leg near or through the ankle, six of the elbow, three of the fore-arm, two of the wrist, one of the neck of the shoulder blade, and one of the knee ; two for dislocation of the thigh, two for dislocation of the elbow, two for amputation of the thigh, two for amputation of the leg, and two for amputation of the fore-arm ; two for hip disease, two for vesico-vaginal fistula, the result of tedious labor, one for osteosarcoma of the shoulder, one for incised wound of the foot, one for excision of the second joint of thumb after fearful laceration and injury of the hand, one for abscess, one for club-foot, one for ophthalmia, one for erysipelas and abscess, and one for inversion of womb. The amount sued for was \$423,640.

There were nine convictions, as follows: Grover, for amputation of the thigh \$2000 ; Dam, for fracture and amputation at the wrist, \$300 ; Chase's estate, for fracture of wrist, gangrene, and reamputation of the arm, \$200 ; Albee, for fracture of the arm, gangrene, and amputation, \$1000 ; Campbell, for fracture of the thigh, \$600 ; Prescott, for fracture of the tibia into the knee-joint, \$400 ; Bulard, for dislocation of the elbow, \$250 ; Tingley, for fracture of the thigh, \$103 ; Allen, for fracture of the leg, \$400.

There were nine settlements, as follows: one for vesico-vaginal fistula following labor, \$300 ; one for fractured thigh within capsule of joint, \$350 ; one fractured elbow, olecranon, \$100 ; one fractured wrist, after one trial and disagreement, \$350 ; one fractured neck of scapula, after six trials, \$125 ; one fractured neck of femur, after one trial, \$25 ; two fractured legs, \$300 each ; and one dislocation of the hip, \$100.

We will now consider the expense of the cases which resulted in acquittal, disagreement, or were never brought to trial. Taking thirty-

four suits as the basis of our estimates, sixty-one surgeons paid out more than \$43,000, which, with court and other expenses, aggregates more than \$100,000 wasted in speculative litigation. All but three or four were groundless actions, and would not have been brought if our state law did not actually offer a premium on malpractice suits.

I think I am safe in saying that my trials alone cost the county of Penobscot from \$2000 to \$3000, and me about as much more, making \$5000 to \$6000 actually thrown away or pocketed by the lawyers.

The class of cases prosecuted were of the most aggravating and dangerous character: congenital deformities, irremediable accidents, and incurable diseases, from which patients did not expect complete restoration, but were satisfied with relief from suffering and natural results, until tempted into prosecutions which would cost them nothing, but, if successful, would pay handsomely from the hard earnings of the physician, whom the law presumes to be the pension bureau of all human ills.

Fractures of the neck of the femur rarely result in bony union, average shortening is five eighths of an inch; fractured thighs and legs have an average shortening of half an inch to an inch and a half; fractured joints are always restricted in motion; amputations of the fore-arm, arm, leg, and thigh are followed by a mortality of twelve to ninety-nine per cent.; excisions of joints with a smaller per cent. than amputations. They are liable to muscular retractions, gangrene, necrosis, secondary hæmorrhages, deformities, secondary amputations, and death; vesico-vaginal fistula may occur in any tedious labor, with or without instruments; osteosarcoma is always fatal; hip disease is generally followed by shortening, and dislocations of the thigh are liable to extensive lacerations and imperfect results.

The largest verdict for damages in alleged malpractice was in the case of Dr. John Grover, of Bethel, amounting, with court costs, to \$2500, for "an error of judgment in not removing more of the limb." the moral of which is, in sawing off a leg, saw it off short. The patient had been afflicted with necrosis of the thigh bone for years, which necessitated amputation of the limb. Dr. Grover successfully amputated it. Conical stump and an extension of the disease called for a second amputation, which did not prove to be high enough to include all of the diseased bone; and, as the weakness of the patient would not admit of cutting off more bone at the time, it was left to a subsequent attempt when the patient had gained sufficient strength. Finally, Dr. Sweat amputated at the hip-joint with success.

Because of the retraction of the flaps and of the rapid extension of the diseased bone, Judge Wells, in his review of the case on exceptions for a new trial, arrived at the illogical conclusion that "nothing short of the entire removal of the bone at the hip would have saved life."

Necrosis and retraction of flaps are not an infrequent result of any amputation. The most eminent surgeons fail sometimes to determine the limit of diseased bone, through infiltrated and indurated tissues. Dr. Grover's second unsuccessful amputation prepared the way for Dr. Sweat's successful one, by the removal of most of the diseased bone, which had reduced the patient, and by giving tolerance to a hip-joint amputation. The average mortality at the place where Dr. Grover amputated is seventy per cent., and at the hip-joint ninety-nine per cent. It would have been foolhardy for Grover to have incurred the additional risk in the weakened condition of the patient, when there was only one chance in a hundred under the most favorable conditions. Judge Wells would not set aside the verdict, but remitted \$500 of the verdict, on the ground that the jury might have been unduly influenced.

I showed in my club-foot case that the parents waited nearly six years before bringing suit for damages, and I now shall show that the claim is good until the doctor's estate is administered upon, four years longer. The estate of Dr. Samuel Chase, of Mount Vernon, was sued, and \$2000 damages claimed for the amputation of the fore-arm, consequent upon the retraction of the flaps of a previous amputation, at the wrist, of a mangled hand. A verdict, including costs, of about \$1200 was rendered, which pauperized his widow and children.

Dr. Wm. Gallupe, of Bangor, was tried six times for fracture of the neck of the scapula, which cost him over \$2000. A worthless and drunken plaintiff set up the plea of an unreduced dislocation of the shoulder. There was much evidence on both sides, and the plaintiff ultimately settled for less than \$150, leaving his attorneys to the tender mercies of their own consciences.

Dr. I. Palmer, of North Anson, was sued, and damages claimed at \$2000 for services rendered to the plaintiff's wife, who died of osteosarcoma of the head of the humerus, which the plaintiff charged was an unreduced dislocation of the humerus. Although the plaintiff was one of the nine enumerated who were able to pay taxable costs, the defense cost the doctor over \$100 to prove that the wife died of incurable cancerous disease.

The surgeon is liable for extemporaneous dressings applied to injuries received *in transitu*. Dr. J. A. Parsons, of Windham, was sued three times, with damages claimed at \$8000, for setting a wrist broken by the accidental overthrow of a carriage while passing through his village. He dressed the injury temporarily, and requested the patient to call in the family physician on her arrival in Portland. The jury disagreed, standing ten for the doctor. Before a second trial the doctor paid \$350 rather than be annoyed with a successful defense,

which would have cost him more money than he paid to settle the suit, as the plaintiff was poor.

The law renders us liable to prosecution for the treatment of hereditary disease developed by exposure or accident. Drs. Emerson and Page were sued for morbus coxarius, or hip disease, developed in a boy injured by being thrown off a sled. They visited the boy two or three times; diagnosticated the case, and applied splints, which the father took off the next day. When the boy became of age he sued for \$1500 damages. This action was brought by one of the present bench of judges, and, although it was dropped, it cost the doctors about \$150.

We are made liable for incurable injuries, as fractures inside of the capsular ligament of the hip-joint. Dr. C. H. Rowell, of Fairfield, was sued for \$10,000 for this fracture, which the prosecution claimed was a dislocation, resulting in shortening and deformity. Verdict of \$1600 rendered, but a new trial was granted, and the doctor settled for \$25. Cost him \$250 to defend. Dr. G. P. Jeffards was sued for the same fracture, \$6000 damages being claimed. There was not any shortening, crepitation, or eversion at the time of the injury. Drs. Cooper and Brodie were once puzzled by a similar case. It resulted in less than two inches of shortening and a very useful limb. Case was referred, and resulted in a verdict against the doctor of \$350. He visited the case only three or four times.

The doctor is liable to prosecution for injuries from which he is dismissed before he has determined their nature. Dr. J. M. Small, of Lewiston, was sued for \$5000 damages for a compound fracture of the ankle-joint. He was dismissed on the second visit, before he had determined whether he could save the leg or not. Doctor prevailed. Cost the plaintiff \$2400. Plaintiff got a very good leg.

The doctor is liable to prosecution in case of injury from which he is dismissed before existing defects can be corrected. Dr. Joseph Springall was sued for \$3000 in case of fracture and contusion of the leg, near the ankle. Discharged on the third week. Shortening followed. Jury disagreed and case dropped. Cost the doctor \$300.

(To be concluded.)

RECENT PROGRESS IN OTOLOGY.

BY J. ORNE GREEN, M. D.

*Ossification-Defects of the Tegmen Tympani.*¹—Several investigations have been made of late to determine the cause of the defects in the ossification of the roof of the tympanum and of other parts of the skull. It is a well-known fact that, in a certain proportion of skulls, the tym-

¹ Archiv für Ohrenheilkunde, vol. xiv., page 15.

panic roof, which separates the tympanum from the brain, instead of being a continuous plate of bone, has one or more openings through it, often of considerable size, and as the result of this defective ossification the tympanic mucous membrane lies in direct contact with the dura mater. It is also an established fact that these openings are found wholly independent of any disease.

All authors agree that it is not possible to refer all of these cases to the same cause, and most of them consider that this condition of the bone is acquired and has been produced by resorption of a previous perfect bone. Jaenicke, however, thinks that in most cases it is a congenital anomaly. Hyrtl and Von Troeltsch think that the resorption of the bone has been produced by pressure from the tympanum, especially of air forced in by sneezing or by inflation. Bückner refers the resorption to pressure of the brain. In the cases in which the defective ossification is not congenital, Jaenicke thinks that it is due to an atrophy from age.

Flesch, after a thorough review of the opinions of these authors, concludes that the dehiscence of the tegmen tympani (as this condition has been named by Hyrtl) is in most cases the result of resorption at this spot, and that only in exceptional ones is it a congenital malformation; in the majority of cases it is due to an increase of pressure within the cranium; great development of the pneumatic cavities, the tympanum, and mastoid cells favor the occurrence of perforation of the tympanic roof.

Otitis Intermittens and Otalgia Intermittens.—In the year 1871 Weber-Liel described¹ two forms of ear disease dependent, as he thought, upon malarial poisoning: one, an inflammatory affection, which he called otitis intermittens; the other, a non-inflammatory affection, which he called otalgia intermittens. Weber-Liel's observations have recently been confirmed by Voltolini,² and Weber-Liel himself has given a more full account of the diseases as they have been observed by him.³ It would be extremely interesting to know if similar observations have ever been made in this country in the malarial districts.

Both varieties of the disease are referred by Weber-Liel to malarial neuralgia of the third branch of the fifth or trifacial nerve, the otalgia being a malarial neuralgia pure and simple, the otitis being an inflammatory affection, the expression of a vaso-motor trophic neurosis accompanying or produced by the neuralgic affection. "After the irritating influence of the malarial poison in the first fever has ended in a severe paroxysm of pain, simultaneously existing in all the branches of the trifacial and neighboring nerves, the malaria is shown for a considerable

¹ Monatschrift für Ohrenheilkunde, No. 11, 1871.

² Monatschrift für Ohrenheilkunde, No. 5 and No. 7, 1878.

³ Ibid., No. 5, 1878.

time longer in the form of a vaso-motor neurosis, as the effect of which there is injection of the tympanic blood-vessels and a collection of mucopurulent secretion in the tympanum."

The symptoms and course of the ear disease are thus given by Weber-Liel: Generally, although not always, there has been a preceding angina or naso-pharyngeal catarrh, when towards evening or in the night there is a chill, either marked, or perhaps so slight that it is scarcely noticed; this is followed by a feeling of fullness and roaring in the ears, and sometimes by vertigo and pressure in the head. The patient passes a restless night, with profuse perspiration, but on the next day is perfectly well, and the ear symptoms have passed off. Forty-eight hours or so after there is another chill, with shooting pains in the ears, deafness, and increased subjective noises, and examination of the ear often shows in this stage an exudation in the tympanum. As the stage of perspiration comes on after the chill, the patient falls asleep, to awake perfectly well, except that the subjective noises continue. If the exudation of the tympanum has ruptured through the drum membrane, the discharge, which was perhaps profuse during the night, ceases by morning, and all pain is relieved. Tenderness of the tragus, which was marked during the attack, is also relieved. Thus the attacks continue, following the quotidian or tertian type, with intervals of perfect freedom from all general symptoms, although the local symptoms in the ears increase in severity, and the intermissions, so far as the ear is concerned, become less and less marked, till finally the ear symptoms are a constant irritation. Usually but one ear is affected. The mastoid cells may gradually become involved and be filled with pus. Local treatment, even paracentesis of the drum membrane or perforation of the mastoid cells, affords only temporary relief to the constantly recurring attacks of pain. Neither the air douche, warm or cold applications, or morphine injections prevent the recurrence of the nightly pains. Quinine alone in large doses gives relief, and the earlier it is prescribed the more thorough and rapid is its action.

In these cases Weber-Liel asserts that he has found the spleen enlarged and tender. If the disease has continued for a long time, as it sometimes does even for months, till the local changes in the ear have become thoroughly developed, the quinine is then of no value. In all cases of subjective noises and tympanic catarrh, dependent upon malaria, large doses of quinine diminish the noises and deafness, he says, while in the common forms of the disease the same medication has the effect of increasing these symptoms very decidedly.

Weber-Liel has seen affections of the meatus, especially furuncles, showing a decided intermittent character, and has healed them rapidly by quinine; in these cases he thinks the disease is the expression also of a vaso-motor trophic neurosis, the result of a neurosis in the course of the trifacial nerve.

Voltolini has described several cases which showed a similar intermittent character, and which were only relieved by quinine. He also protests against the common method of giving quinine in large doses at once, but prefers to prescribe one or two grains every hour or every second hour; by this method he claims to have met with brilliant results. In obstinate cases of malarial disease he considers that the quinine should be taken for a long time; not, however, in frequent doses after the acute symptoms have been relieved, but four, three, or two times in the day, and this to be continued for some three months.

(*To be concluded.*)

PROCEEDINGS OF THE ESSEX NORTH DISTRICT MEDICAL SOCIETY.

THE quarterly meeting of this society was held in Haverhill, October 23d. Dr. W. H. Kimball, of Andover, president, in the chair.

Dr. G. M. Garland, of Boston, gave a demonstration of the system of pneumono-dynamics, so fully set forth in his book.

An interesting paper on the Embryology of the Lungs was read by Dr. C. D. Hunkin, of Haverhill; it was illustrated by microscopical specimens of Dr. Hunkin's own preparation. The following is an abstract:—

The embryological study of the lungs is best made from microscopic sections of the embryos procured from the eggs of the hen, as these are by far the easiest to obtain. The impregnated hen's eggs are to be placed in an artificial breeder. At the fiftieth or sixtieth hour of their development, they are to be opened, and the embryos removed. The embryos are to be hardened in absolute alcohol, and the sections washed in distilled water. After staining in a dilute solution of carmine they are to be made translucent by means of glycerine.

Of the three layers of cells by which the lungs of the embryo are surrounded, that called the middle is the most important for our consideration, since with the exception of the epithelium of the pleuræ and the cylindrical epithelium of the bronchi, it builds the substratum for the collective tissues of the lungs and pleuræ. A section on the level of the heart of an embryo, prepared as above, under the microscope discloses the first traces of the lungs as a pair of protuberances, lying symmetrically on both sides of and projecting from the primitive intestine, the so-called *Kopfdarm* of Remak. From an embryological stand-point, the lungs may be regarded as a thickened layer of the primitive vertebral cells,—as a double organ arranged uniformly on both sides of the intestine. . . . The epithelium of the lungs, since it plays not an inconsiderable rôle in the pathological conditions to which the lungs are liable, is worthy of consideration. In choosing the material for microscopic examination of the lung epithelium, the lungs of a dog, inasmuch as in them the alveoli are stronger and the epithelium is larger than in those of many other mammals, will be found most suitable.

The following are some of the points settled by investigations of recent date:

(1.) The normal lung alveolus has, during the extra-uterine as well as during the uterine life, a layer of epithelium which is continuous with the rest of the cells covering the bronchi and their branches. (2.) All epithelial forms are represented in the lungs. (3.) The cubic cells of the embryo alveolus may, without undergoing fatty degeneration, with the early acts of respiration, change to a form of polyhedral, flattened epithelium. The lungs have not a form of epithelium peculiar to themselves,—the amount of space in the alveoli at all times determining the form and size of the epithelium. (4.) The tissues of the lungs are liable to the same pathological conditions as similar tissues are in other parts of the body.

BROWNE ON THE THROAT.¹

MR. BROWNE, who has long been known as a throat specialist in London, has given us an excellent text-book as the result of his large experience. The book bears evidence throughout of personal familiarity with the subjects treated, which is more than can be said of many so-called hand-books.

Questions of purely pathological interest are not dwelt upon, it being the object of the author rather to afford a ready reference book for the general practitioner's aid in diagnosis and treatment. So it happens that in the way of examination and treatment comparatively little is said about methods, except such as the author himself approves and uses. The book is not an exhaustive treatise (this exhaustive work must now be done in this, as in other special fields, by monographs), but is a well-arranged presentation of the diseases of the throat and their treatment, such as a skilled clinical teacher would give in his lectures. The arrangement of the book is exceedingly good. After the preface and introductory come chapters on the laryngoscope and how to use it, the anatomy of the larynx, the laryngoscopic and rhinoscopic images, general semeiology of throat diseases, general therapeutics of throat diseases; then chapters on special diseases of the throat, a table to aid in differential diagnosis, a dozen or more pages of formulæ used by the author, and a short bibliography of systematic works of reference; and at the end one hundred excellent illustrations in color, drawn from nature, and on stone, by the author. We have not space to epitomize the different chapters, or to dwell upon their many excellences, but will indicate a few points which we feel will excite criticism.

A few pages are given to an outline of the anatomy of the larynx, in which we confess to be somewhat surprised to find that Mr. Browne considers that the upper aperture of the larynx is "closed by a kind of movable lid, the epiglottis," and that during deglutition "it [the epiglottis] closes firmly on the laryngeal orifice." No mention is made of the middle piece of the thyroid cartilage (Halbertsma, Luschka), a knowledge of which is perhaps of practical importance in the operation of thyrotomy.

¹ *The Throat and its Diseases.* With One Hundred Typical Illustrations in Color, and Fifty Wood-Engravings, designed and executed by the author. LENNOX BROWNE, F. R. C. S., Ed., Senior Surgeon to the Central London Throat and Ear Hospital, etc., etc. Philadelphia: Henry C. Lea. 1878. Pp. 351. Royal octavo.

The author is a decided advocate of vapor inhalations, and considers that though atomized fluid inhalations may be of value in pharyngeal and nasal affections, they are useless in affections of the larynx. He here repeats the physiological error in regard to the epiglottis by saying, "In point of fact, however, very little of the spray enters the larynx. The moment it impinges on the epiglottis, that valve closes tightly against the entrance of so foreign an intruder." His chief objection, however, to atomized fluids for the larynx is that they produce hyperæmia mechanically; but very few, we think, would agree that there is more mechanical irritation from spraying the larynx than from an application with the brush, of which the author approves.

We are glad to see that the posterior nasal douche is urged, instead of the anterior, for cleansing the nares. The importance of galvano-cautery in the treatment of the naso-pharynx receives due attention. Notwithstanding the weight of modern opinion at home and abroad, the author's clinical experience will not allow him to consider diphtheria and membranous laryngitis identical.

In the treatment of syphilitic stricture of the larynx, splitting and dilatation from below through the opening made by the operation of tracheotomy would appear to the author to offer much more hope than dilatation by bougies through the natural passage, which thus far cannot be said to have been followed by any great success.

In the treatment of tubercular laryngitis the author agrees with Dr. C. J. B. Williams that the greatest comfort may be given by appropriate local treatment.

The chapter on benign neoplasms in the larynx is short, but demands special notice on account of the reiteration in it of the author's radical views on the subject of operative treatment. The propositions which we quote below are certainly worthy of careful thought, though we may not feel the author justified in taking such extreme ground.

The propositions submitted for consideration are the following:—

(1.) Attempts at removal of growths from within the larynx are not in themselves so innocuous as is generally believed, but, on the contrary, direct injury of healthy parts of the larynx, leading to fatal results, is by no means of unfrequent occurrence.

(2.) The functional symptoms occasioned by benign growths in the larynx are in a large proportion of cases not sufficiently grave to warrant instrumental interference.

(3.) Many of these new formations will disappear, or be reduced by appropriate local and constitutional medical treatment, especially when of recent occurrence.

(4.) Recurrence of laryngeal growths after removal *per vias naturales* is much more frequent than is generally supposed.

(5.) While primary malignant or cancerous growths are of rare occurrence within the larynx itself, benign growths not unfrequently assume a malignant and even cancerous character by the irritation produced by attempts at removal.

(6.) The instruments most generally now in use are far more dangerous than those formerly employed.

(7.) And lastly, the cardinal law that "an extra-laryngeal method ought never to be adopted unless there be danger to life from suffocation or dysphagia" should be applied with equal force to intra-laryngeal operations, and it is a subject worthy of consideration whether, in many cases, tracheotomy alone might not be more frequently performed: (a) with a view of placing the patient in safety when dangerous symptoms are present; (b) in order that the larynx may have complete functional rest; and (c) as a preliminary to further treatment, radical or palliative.

In regard to the first proposition we admit that much injury may have been done to healthy parts of the larynx by unskilled hands, and by skillful ones too, when anxious to make a brilliant operation, or to get through with a case; but we do not indorse the belief of Dr. Jelenffy, which our author considers well founded, that one does not see much of the larynx after the instrument has entered it. We have been amazed and shocked at the reckless thrusting of instruments into the larynx after growths to which Mr. Browne refers, and think such methods utterly unjustifiable; but we also know that with patient training the larynx will usually tolerate a curved instrument resting upon the epiglottis, and remain open long enough for the operator to follow the point of his instrument to the affected spot. We do not believe that a careful operator will ever do serious injury to the healthy parts of the larynx. No mention is made, we believe, of local anæsthesia of the larynx, which may on rare occasions be used to advantage, though we admit there might be some danger of its doing local harm.

In regard to Proposition 2, we think that most laryngoscopists would be deterred from removing *any* disagreeable functional symptoms by operation only from considerations presented in Proposition 5.

Any new formation (3) which will disappear by "appropriate local and constitutional medical treatment" must be very small.

Liability to recurrence (4) depends, in the larynx as elsewhere, on the nature of the growth, the mode of removal, and the subsequent treatment of the seat of the growth.

Irritation (5) certainly seems to be a bad thing for some cases of apparently simple papilloma, but what the pathological history of such cases would have been without the irritation it is impossible to say. Certainly, if one sees a growth recurring as fast as he can remove it, he had much better let it alone, unless he can do a very radical operation.

We agree with the author (6) in condemning the use of clumsy steel forceps and other such instruments, but think that many safe instruments, that is, safe in careful hands, have been invented beside the guarded ring-guillotine of Stoerk.

One's opinion of Proposition 7 depends upon his opinion of the preceding propositions. Of the remarks in regard to tracheotomy, we heartily approve.

In the early forms of pharyngo-laryngeal cancer the author recommends galvano-cautery as a palliative treatment. The only disease for which removal of the larynx entire seems justifiable to the author is recurrent fibromata or sarcomata, for which it has been twice adopted, once by Bottini and once by Foulis. The latter's patient wears an artificial larynx, and has complete control of his voice.

In conclusion, we will only say that the more we look at this book the more satisfactory it seems, and we heartily recommend it to the general profession.

Excellent paper and large type add much to its value.

THE "TIDAL WAVE."

WE have frequently commented upon the extraordinary propensity for publishing medical journals, which has slowly developed itself in this country until the crop of rank and exuberant weeds bids fair to overrun the land, and kill out such taste as may exist for a healthy and permanent growth of periodical literature not depending for its sustenance upon the mold of some decaying school, society, or business interest. That we have hitherto fallen far short, in our estimate, of the extent to which this peculiar form of medical enterprise has been carried will be seen by a glance at the interesting and highly valuable statistics prepared by Dr. Billings, which we give in this week's issue.

We have thought it a not inappropriate occasion, in opening our one hundredth volume, to offer this retrospective glance to our readers, and hope that it may serve as a hint to the profession that a not unimportant factor in the educational problem is, for the lack of united, unselfish, and intelligent action, in a fair way to be discarded.

Until the close of the first quarter of the present century medical journals were few and far between, the parents of the Philadelphia quarterly and our JOURNAL being almost the sole representatives; about this time the success of the English periodicals in London and Edinburgh gave a new impetus to medical literature in this country, but it was not until the close of another quarter of a century that the morbid character of this movement fully developed itself. The reaction following the business depression of 1857 appears to have been favorable for the breaking out of what we can hardly call anything but an epidemic. The period of the war exerted but a temporary inhibitory influence upon the progress of the disease, and the subsequent "flush times" have enabled it to germinate into the proportions of a scourge. Since the war, it will be seen, over eighty new journals have been started, and over fifty have come to an untimely end. The advent of thirteen new journals during the past year alone shows that this tidal wave has not yet broken, but threatens to submerge us deeper still. A glance at the table giving the number of journals in other countries shows that we have nearly twice as many as Great Britain, but are far outnumbered by Germany, although we must remember that under this head two empires are included. France also is suffering from similar influences. A glance at this table will, we think, convince the reader that the value of a nation's periodical literature is in an inverse ratio to its quantity. Where can be found any journal to compare with the vigorous London weeklies for valuable and interesting reading? The medical science of the world is presented every week in its freshest form. On the other hand, the high scientific stand which Germany has taken is not reflected as it should be by its periodicals, which have steadily lowered their standard during the last

decade. We trust this article will serve a good purpose in helping to point the way to the attainment of a better system than the country now enjoys, one calculated to present to the world in a worthier form the great variety of excellent work produced by our leading men.

MEDICAL NOTES.

— We call the attention of our readers to the fact that the present number of the *JOURNAL* is enlarged to forty pages. During the past year, owing to the very crowded state of our columns, we have found it necessary frequently to increase the size to thirty-six pages. This shows a great addition to the amount of reading matter presented a year ago, when our numbers usually contained but twenty-eight pages. We shall continue to give enlarged editions from time to time, as occasion requires.

— We are glad to see that Dr. Dwight's valuable researches in the study and identification of the human skeleton have excited interest in London, as will be seen by reference to a recent leading article in the *British Medical Journal*, which says: "Of late years attention has been more directed to the minute points of histological anatomy, rather than to the great general outlines which are patent to the naked eye. We would not in any way depreciate the value of those researches which have recently contributed so much to our knowledge not only of the physiology but of the anatomy of the human body; still, we cannot but welcome a return to the older method of examination of objects without the help of a microscope, more particularly when, as in the present case, in the hands of a skillful observer, they afford us such useful and admirable results. . . . In this country, as in others, there must be many persons who, with time at their disposal, have access to large and carefully selected collections of human bones; to such persons, Dr. Dwight's essay should appeal with peculiar force, for it would show them what valuable results may be obtained by a little well-applied industry from sources which are to some extent available to most. Many interesting points could no doubt still be found by a careful comparison of a number of bones, and in working out these still other and more valuable questions would arise. In any case it would be well if, after the manner of Dr. Dwight, a more thorough and systematic attention were given to the individual bones which go to make up the collections to which each has access."

— Dr. Albrecht Gerth claims to have cured laryngeal catarrh by the administration of oil of turpentine in the form of an inhalation.

— The London *Lancet* mentions the assertion of a sanitary officer, namely, that when houses are reoccupied, after having been empty for some time, an outbreak of typhoid, diphtheria, or other zymotic affection often occurs. The cause is supposed to be an absence of water in the cistern and pipes, and the presence of foul air from the main sewer, and the closure of all windows and other means for the admission of pure air. The remedy suggests itself.

— The *Wiener medicinische Wochenschrift* reports an interesting episode which occurred at a recent medical meeting in Vienna. A certain Dr. Heller

then and there spoke as follows: "Without caustics, such as nitrate of silver, potassic hydrate, sulphuric acid, nitric acid, hydrochloric acid, chromic acid, Vienna caustic paste, chloride of zinc, and without pricking or scraping, — in short, without piercing, burning, or cutting, — I have treated my lupus cases for a number of years, and have cured them without leaving such scars as result from plastic operation. My process is based upon the endeavor to induce a spontaneous resorption of the lupus infiltration, and at the same time to improve the blood dyscrasia, without which cure is impossible. I believe that every case of lupus is curable by this method." Dr. Heller then exhibited a number of patients, who all bore cicatricial records of former treatment by Hebra, Kaposi, and Neumann, while their faces were clear and scarless on parts treated by Heller, but no photographs of the condition of patients before treatment were shown. When asked for more definite information regarding his plan of treatment, Dr. Heller replied in a hesitating, reluctant manner that he was not prepared to divulge his secret. A very lively exchange of opinions on this point was imminent when the chairman interposed in behalf of good order. Dr. Heller was invited to make known his great specific at the next meeting.

— Four hundred and seventy-six students matriculated at the London medical schools in October, — the total number of students being seven hundred and fifty-one.

— Says the *Berl. klin. Wochenschrift*: "A physician of Sangerhausen, in Thuringia, having occasion to prescribe for sleeplessness in a hysterical patient, wrote the following prescription: "R̄. Chlorhydr. 15.0, tinct. opii 15, aquæ 60.0. M. A third part to be administered in the evening as an enema." The patient died, and a prosecution was instituted against the physician and the apothecary who dispensed his prescription. A *lapsus calami* had been committed on the part of the former, who omitted to put "gtt." after the "tinct. opii 15." The prescription was made up by a young unqualified pupil, who read the 15 to signify *grammes*, as the 15 of the chloral and the 60 of the water obviously did. A properly educated apothecary would have taken the prescription to the physician before dispensing it. The court sentenced the physician to one month's imprisonment, the apothecary to two months, and his pupil to three months.

— In a recent number of the JOURNAL, the description of the arrangement of water-closets for the nurses' department in the Johns Hopkins Hospital gave the impression that they are shut out from the external air; and so it would seem in looking at the foundations already laid, or in seeing the plans without an explanation of them. The water-closets are not open to direct sunlight, but they are ingeniously constructed so as to have the external air brought to them, being next to, and inside of, large shafts for air *open at the top and bottom*, and with a system of ventilation entirely independent, so that fresh air will constantly be passing into and through the water-closets, and out again through a central shaft, as if they were next to an external wall.

PHILADELPHIA.

—A movement is on foot to extend the sphere of usefulness of the Philadelphia County Medical Society by dividing it into sections, after the plan of the American Medical Association. This has the support of some of the leading members of the society, and a resolution has been adopted, appointing a committee of conference to wait upon the Pathological and Obstetrical Societies, which may be considered in one sense as outgrowths from the older society, and which would naturally find their interests materially affected by such a change. The project is considered a good one, and is indicative of the progressive spirit which has been infused into the County Medical Society during the last few years. Other such indications may have been noticed, such as the fact that the International Medical Congress of the centennial year owed its inception to this society, and its foundations for success were laid by the labors of a committee consisting principally of members of the County Medical Society. The incorporation of the society, the organization of a library for the use of its members, and the establishment of a mutual aid association have all been accomplished during the year that has just closed. The guiding spirit in these later progressive measures has been the learned and dignified president of the society, Dr. Henry H. Smith, late professor of surgery at the University of Pennsylvania, whose interest in the society and untiring efforts for its advancement were so generally recognized as to lead to his unanimous reelection when his first term of office expired.

—The Mutual Aid Association of the Philadelphia County Medical Society is the title of an organization framed upon the plan of two similar associations in New York. It was incorporated September 25, 1878, its object being purely a benevolent one, affording pecuniary aid to widows and orphans of such members as require it, as well as to such members as from long-continued illness or accident may be compelled to seek such aid. Only members of the Philadelphia County Medical Society are eligible to participate in the advantages of this society. The annual dues are two dollars; fifty dollars will create a life membership. The following specific provisions are made for destitute widows and orphans: "Every widow shall receive four hundred dollars per annum from the association; but for every ten dollars or multiple of ten dollars of income that she receives from any other source an amount equal to fifty per cent. of said income shall be deducted from the annuity.

"Every child entitled to relief shall receive one hundred dollars per annum, subject to the same reduction of fifty per cent. of income from other sources referred to in above section.

"Every child on arriving at the respective age" (boys sixteen, girls eighteen), "when the annuity ceases, shall receive fifty dollars (\$50) as an outfit.

"Where there are full orphans (without mother), then each case shall be especially investigated by the committee on benevolence, and the amount fixed by the standing committee on their report, according to the circumstances of the case."

When the income of the society shall warrant the increase, the annuity for widows is to be raised to five hundred dollars. "The earnings of a widow

or children by their own industry or exertion shall not be considered as income subjecting the annuity to deduction." The New York societies with a similar object have been very successful, and have accomplished in a quiet way a vast amount of good.

The establishment of some such relief organization appears to be peculiarly appropriate just at present, when the reports of the various dispensaries are coming in, which in stereotyped phrase congratulate their patrons "upon the rapid increase in the numbers of those seeking the benefits of your noble charity," etc., etc. One of the medical officers of such an institution, in referring to its flourishing condition, recently remarked with pride, "Not only are the numbers increased, but there is a much better class of people coming than formerly." When the rich attend (which sometimes happens), the felicity of the attachés must be complete. The great amount of advertisement by the public press and by the circulation of the reports, and the cheap reputation for benevolence that a physician obtains by his connection with such institutions must be considered very advantageous, for a dispensary doctor said a few days ago, while acknowledging the evils of the system, "It is true that it cheapens medical advice, and pauperizes the community, and it ought to be changed, but what can I do? If I resign to-day, there will be a hundred applicants for my position to-morrow."

In 1876 there were forty-four public medical dispensaries in Philadelphia; doubtless there are more now. Besides, there is an indeterminate number of private and special dispensaries, as well as the dental dispensaries, where surgical operations are performed and treatment prescribed.

The hospitals of Philadelphia at present number forty, according to the statement of a member of the State Board of Charities, this including a few like the Howard Hospital and the Charity Hospital, which have no accommodations for resident patients, and are simply dispensaries. In these hospitals there are now over eleven hundred empty beds; or, in other words, five hospitals the size of the Pennsylvania Hospital might now be closed to the public without being missed by the community!

The question has been asked, Is it not high time that some decisive step should be taken by the profession, in view of the alarming abuse of medical charities? And in truth an investigation of the whole subject is now being made by a special committee of the County Medical Society, which promises an early report. May wisdom guide their counsels.

The laborer is worthy of his hire, but if the efforts of those who persistently saw away at the branch that supports them prove successful, the currency value of a physician's services will soon be an unknown quantity, to be represented only with the aid of the metric system, perhaps as a dynamized centesimal dilution of nothing at all. By all means hasten the millennium.

LETTER FROM PHILADELPHIA.

MR. EDITOR, — The Philadelphia Society for organizing Charitable Relief and repressing Mendicancy is the expressive title of a comprehensive charitable organization, projected by a number of our benevolent citizens as long ago as last March, but which lately has made rapid progress towards practical working, and has received general commendations and support from all classes. The first annual meeting of this society was recently held in this city, at which ex-Mayor Fox presided, and its objects and aims were expounded by Governor Hartranft and many of our leading citizens.

In endeavoring briefly to give an outline of the plan of organization, it may be premised that the method of relieving distress and pauperism that has grown up with the city has proved very inefficient for a number of years. The growth and consolidation of the city have been accompanied by a corresponding increase in the number of charitable organizations, acting independently of each other, which tended directly to encourage imposture by their inability to trace their beneficiaries. In one of the suburban wards of the city, however, a systematic plan was adopted some five years ago, modeled upon the London Charity Society, which has proved eminently satisfactory in its working, and has become somewhat celebrated as the Germantown plan. In this scheme a central administration is made to examine into the claims of every applicant for relief before aid is extended. Private charity is expected to flow through this channel, and indiscriminate giving, especially to street beggars, is strongly discountenanced. The organization also acts to some extent as a labor bureau, and endeavors to provide the poor with work. These are the salient points of the plan which, proving successful elsewhere, is now to be tried on a large scale in an organization civic in extent, when completed, and which more than half of the city has already agreed to adopt. A committee, including the mayor of the city, and the heads of various municipal departments, — the Board of City Trusts, Prison Inspection, Board of Health, Guardians of the Poor, — with seventy citizens, constitutes the controlling element called the Central Board. The officers of the society proper consist of a president, three vice-presidents, secretary, and treasurer. In addition to this there are subordinate ward associations, each with a superintendent, and a corps of lady visitors, and administrative offices at convenient localities, where records are kept of each case and the result of inquiry, etc. In order to interest every one in the scheme, the annual contribution from members of ward associations was set at one dollar, but bequests and donations are also needed. As it is estimated that more than four millions of dollars are annually spent in charity in the City of Brotherly Love, it is believed that this organization will not only find plenty of work to do, but will also have an abundance of means.

The relationship of this to medical matters will be recognized when we mention the fact that it will lead to a supervision of our three hundred and more dispensaries: but more directly will it affect their practice by requesting them not to extend medical aid a second time to the same individual unless he shall bring with him a certificate from the ward superintendent declaring him to be deserving. If the medical profession has any influence with the medical

officers of these greatly abused charities, this plan may prove a simple method of solving that vexed problem.

Mr. Callender, of St. Bartholomew's Hospital, London, is in this city, where it is said he expects to remain until February next, his engagements being partly professional and partly social.

At the Pennsylvania Hospital on Saturday last, in the presence of Mr. Callender and others, Dr. Thos. G. Morton did his third amputation at the hip-joint, being the eighth that has been performed at the hospital (the first having been by Prof. Jos. Pancoast in 1853 or 1854, in a case of so-called encephaloid cancer of the femur, the man living for a year afterward, but ultimately dying from a return of the disease in the lungs). Dr. Morton's cases have all been reamputations for disease of the bone (osteomyelitis), and both of the preceding cases are living. The first was one of gun-shot injury in the Franco-Prussian war, upon whom the hip amputation was performed in 1867. This case was also shown at the clinic, and the patient stated that he weighed thirty pounds more than he ever did with both of his legs on. Dr. Morton lays particular stress upon the administration of a full dose of quinia (say one gramme) on the evening before the operation, which he believes tends to diminish shock.

Mr. Callender afterwards visited the Jefferson Medical College Hospital, where Prof. S. D. Gross, among other cases, operated upon two cases of stone in the bladder by the lateral method, one being a boy of ten years, the other a man of sixty. Previous to these two operations Professor Gross had performed lithotomy one hundred and forty-seven times, with thirteen deaths, a rate of mortality of one in eleven and one half. Of seventy juvenile subjects all excepting two recovered, while in seventy-seven operations upon adolescents, adults, and older persons there were eleven deaths, a ratio of one in seven. For the last thirty or thirty-five years he has performed the lateral operation exclusively.

The Mütter lectureship of the College of Physicians is filled this year by Dr. S. W. Gross, who is giving a series of valuable lectures on the Surgical Pathology of Tumors.

Mrs. E. H. Cleveland, M. D., professor of obstetrics at the Woman's Medical College, died in this city December 8, 1878. She had many friends both in society and in the profession. A graduate of Oberlin College and of the Woman's Medical College, she received the diploma of the Hospital Maternité of Paris, where she spent some time in her studies. She was the author of a paper which was presented to the Philadelphia Obstetrical Society not long ago, and which has been published in its transactions. She had performed ovariotomy several times, and had considerable skill and experience as a surgeon.

At the medical schools the attendance is almost, if not quite, as large as last year. On good authority it is stated that the adoption of the third term at Jefferson College will not be much longer delayed. The working of the new plan at the University is claimed to be perfectly satisfactory, and increasing in favor.

PHILADELPHIA, December 17, 1878.

SHORT COMMUNICATIONS.

SANITARY ODE TO "CATARRH."

I.

CATARRH,
 Ah, ah!
 Must we endure
 Another cure,
 And more base advertisements read,
 Which do disclose
 About the nose
 Falsehoods so vile,
 We see, the while,
 Worse than disease is man's accursèd greed!

II.

The nose
 Was good enough
 Before arose
 Such stuff,
 The vile excretion of a venal pen.
 To breathe, to smell,
 It served men well;
 An organ sound
 As any 'round.
 Whence comes the difference 'twixt now
 and then?

III.

Oh, snuff! oh, puff!
 'Tis very rough
 All day with spray
 To play away
 On throat or nose,
 Without repose;
 And medication at such cruel rates
 Can organs poor
 Not long endure;
 What once could smell now only insufflates.

IV.

Better away,
 Nose of to-day!
 Quack scoundrels ripe
 In filthy type
 Libel the face
 Of human race.
 Their words I trace —
 I seem to hear their villainous hurrah,

See false eyes glare;
 As they declare,
 And I proceed
 Their words to read.

Hear this accursèd creed: "Even *children*
 have catarrh"!

V.

Oh, slander base!
 Let me no more
 The words explore
 Of this vile race,
 For visible cash, not hidden cause, who care.
 Childhood's "poor nose"
 Has many woes;
 Whence comes *this* woe
 I now will show:
 "Catarrh" is latent in foul school-house air!

VI.

For in those rooms
 A thousand fumes
 And odors dire
 Children inspire.
 There by no board
 Of health explored
 They sit and gasp, and sigh for wholesome
 airs,
 While all around
 They hear the sound
 And the commotion
 Of "air in motion
 Called wind." Their airless state who
 knows or cares?
 Not the committee
 Of many a city,
 Unless this ditty
 Shall move their pity
 And ventilate school-houses near and far.
 Let all receive
 Some air to breathe;
 The "school-house smell"
 Destroy as well.
 If they will thus comply,
 No more need mothers cry,
 "I do believe this child has got catarrh!"

OBITUARY. — Died in Roxbury, December 26th, James Henry Davenport, M. D., thirty-two years eight months, a graduate of Harvard University in arts and in medicine, and of Columbia College, New York, in medicine.

The career of this young physician is deserving of more than a passing notice, and we avail ourselves of the unpublished words, written for another purpose, of a friend who knew him well : —

“Never in strong health, Dr. Davenport had been for years so ill with pulmonary disease as frequently to be considered in immediate danger by experts, who years ago repeatedly asserted that he could not live from one season to the next. Against such odds he fought manfully, always aware of his condition, but never despairing.

“At the medical school he was noted for application, thoroughness, and great progress. Graduating with distinction in New York as well as at Harvard, he was at once appointed assistant physician at Deer Island Hospital, where his devotedness was a subject of general remark. Through his efforts important changes were made there in the interests of the sick poor.

“Leaving Deer Island, he established himself at the South End of Boston, where he was gaining quite a professional reputation, and was considered one of the most promising practitioners of his age. But the previously smoldering disease all at once developed, and obliged him to abandon general practice. His courage, however, did not fail him; energy he never lacked.

“He had already written valuable articles for medical journals. Becoming acquainted with the family physician of his wife’s family, — a noted and reputedly successful operator for hernia, a peculiarly reticent person, who had not till then found an interpreter, — Dr. Davenport took up the study of hernia, which he could do without the exposures incident to general practice. He obtained from the operator his methods of treatment; repeated the operation until he felt confident of its value; investigated the physiological and pathological processes on which its success depended; and embodied the results of his labors in a volume entitled *The Cure of Rupture*, a work of 196 pages 12mo, noteworthy for its literary and scientific excellence. This he accomplished while in such poor health that his professional brethren were in continual wonder how it was possible for him to sustain the constant struggle for existence merely.

“Through college life and after, Dr. Davenport’s chief delight had been in studies bearing upon magnetism, electricity, and thermo-electricity. To these studies he devoted all his available leisure. He kept abreast if not in advance of all the recent discoveries; and a chief trial in his departing strength continued to be the disappointment he felt in not being able to carry forward experiments which he was confident would surpass in results any yet attained.

“In yielding to the inevitable, Dr. Davenport ever showed an enduring fortitude, an uncomplaining spirit, an unshaken faith, and a resigned content worthy of all admiration.

OBITUARY. — At a meeting of the Pittsfield Medical Association, held December 23, 1878, the following resolutions were unanimously adopted : —

Whereas, It has pleased God in his infinite wisdom to take unto himself our beloved brother Dr. Charles D. Mills,

Resolved, That it is with profound sorrow that we see our circle broken by the removal of one whose kindly nature and conspicuous virtues have endeared him to us all; who was frank and courteous toward his professional brethren, kind and sympathetic toward his patients, honorable in all business relations, remarkable for his benevolence, and, above all, an active and zealous Christian.

Resolved, That, although we cannot comprehend why one so dear to us all, and so useful to the community, should be thus removed in the prime of his life and usefulness, yet we bow to the will of Him who is the fountain of wisdom and of love.

Resolved, That our heart-felt sympathy be extended to his grief-stricken wife and children, whom we commend to the loving care of our Heavenly Father.

Resolved, That a copy of these resolutions be transmitted to the wife of our deceased brother, and that they be published in the Boston Medical and Surgical Journal, and the Pittsfield Eagle and Sun.

OBITUARY.—At a meeting of the Hampden District Medical Society, in Springfield, December 17, 1878, the following resolutions were unanimously passed:—

Resolved, That in the sudden death of our late associate, Dr. H. G. Stickney, the medical profession has sustained the loss of an ardent worker, a thorough practitioner, and a true friend to the advancement of medical science.

Resolved, That by the decease of Dr. Stickney the community has been deprived of an intelligent and public-spirited citizen, and society of a genial and kind-hearted man.

Resolved, That a copy of these resolutions be transmitted to Dr. Stickney's relatives, to whom we extend our deepest sympathy in this hour of their affliction, to the daily papers of this city, and to The Boston Medical and Surgical Journal.

G. S. STEBBINS, }
G. W. DAVIS, } Committee.
T. F. BRECK. }

A true copy. Attest: F. W. CHAPIN, *Secretary Hampden District Medical Society.*

COMPARATIVE MORTALITY-RATES.

	Estimated Population, July 1, 1878.	Deaths during week ending Dec. 21, 1878.	Annual Death-Rates per 1000 living.		
			For the Week.	For the Year 1877.	Mean for ten Years, '68-77.
New York.	1,093,171	475	22.60	23.42	28.71
Philadelphia.	876,118	286	16.98	18.80	21.54
Brooklyn.	549,438	227	21.50	21.51	25.50
Chicago.	460,000			17.83	22.39
Boston.	375,476	152	21.05	20.10	24.34
Providence.	100,000	32	15.64	18.81	19.20
Lowell.	55,798	11	10.24	19.09	22.50
Worcester.	54,937	21	19.89	20.06	22.30
Cambridge.	53,547	22	21.36	18.69	20.83
Fall River.	53,207			21.35	24.96
Lynn.	35,528	8	11.71	20.42	19.67
Springfield.	33,981	5	7.66	16.02	19.77
Salem.	27,140	15	28.74	20.38	21.15

THE METRIC SYSTEM IN MEDICINE.

OLD STYLE.

METRIC.

mi. or gr. i. equals	Gms.	06
f ʒi. or ʒi. equals	4	
f ʒi. or ʒi. equals	32	

The decimal line instead of *points* makes errors impossible.

As .06 (Drug) is less than a grain, while 4. and 32. (Vehicle) are more than the drachm and ounce, there is no danger of giving too large doses of strong drugs.

C. C. used for Gms. causes an error of 5 per cent. [excess].

A teaspoon is 5 Gms.; a tablespoon, 20 Gms.

ANNOUNCEMENT.—We take pleasure in informing our readers that in addition to the valuable services of our assistant editor, Dr. G. B. Shattuck, in Boston, Dr. Frank Woodbury, of Philadelphia, will act in a similar capacity as our representative in that city. Dr. Hamilton Osgood will continue his contributions, which have so materially added to the interest of our pages, as will Dr. G. W. Gay, of this city, and Drs. P. Brynberg Porter, of New York, and Norman Bridge, of Chicago.

BOOKS AND PAMPHLETS RECEIVED.—Zur Therapie der Chronischen Metritis. Von Dr. A. Martin. Berlin. 1878.

Series of American Clinical Lectures. Edited by E. C. Seguin, M. D. Vol. III. No. 11. Two Lectures on Lister's Antiseptic Method of Treating Surgical Injuries. By James L. Little, M. D. Vol. III. No. 12. The Diagnosis of Progressive Locomotor Ataxia. By E. C. Seguin, M. D. New York: G. P. Putnam's Sons. 1878.

Thirty-Eighth Annual Announcement of the Missouri Medical College, formerly known as "McDowell College." St. Louis, Mo.

The Mechanical Treatment of Sterility. A Paper read before the Maine Medical Association, June 11, 1878. By S. C. Gordon, Jr., M. D. Portland.

The Principles and Practice of Surgery. By John Ashurst, M. D., Professor of Clinical Surgery in the University of Pennsylvania, etc. Second Edition. Philadelphia: Henry C. Lea. 1878.

Fourth Annual Report of the Officers and Superintendent of the Asylum at Walnut Hill, Hartford, Conn. 1878.

The Development of the Nervous Tissues in the Human Embryo. By Dr. H. D. Schmidt, Member of the American Neurological Association. Chicago. 1877. (Journal of Mental Diseases.)

The Structure of the Colored Blood Corpuscles of the Amphiuma Tridactylum, the Frog, and Man. By Dr. H. D. Schmidt.

Case of Repeated Attacks of Apoplexy, with Aphasia. Dr. H. D. Schmidt. (Journal of Mental Disease.)

Ninety-Sixth Annual Catalogue of the Medical School (Boston) of Harvard University, 1878-79. Cambridge: University Bookstore. 1878.

Quebec Lunatic Asylum, Province of Quebec. Report for the Year 1876-77.

The Prophylaxis of Puerperal Convulsions. By E. S. Dunster, M. D. (Toledo Journal.)

Sugar Frauds and the Tariff. By Henry A. Brown, Saxonville. 1879.

Clinical Lectures on Diseases of Bone. By C. Macnamara. London: Macmillan & Co. 1878.

On Gastro-Elytrotomy. By Henry J. Garrigues, M. D. (Reprint.) New York: D. Appleton & Co. 1878.

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The Scientific American Handbook and Catalogue, 1879. New York: Munn & Co., Publishers.

Annual Report of the Pennsylvania Free Dispensary for Skin Diseases. Philadelphia. 1878.

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REPORT ON MALPRACTICE.¹

BY EUGENE F. SANGER, A. M., M. D., OF BANGOR.

“IN a multitude of counselors there is safety” does not apply to our profession, because the medical counselor is liable to be included with the attending physician in malpractice suits. If the attending physician is poor and the counselor rich, the latter may have to contend single-handed, as law is very discriminating in its victims.

Dr. J. A. Richards, of Farmington, was sued, with \$10,000 damages alleged, for partial dislocation of the ankle, fracture and contusion of the leg, which he saw but once in consultation. Advised placing it upon a splint and waiting until the swelling was reduced. Acquitted; patient poor. Dr. Anderson, of Gray, was sued for \$10,000 for two consultation visits with Dr. Stevens in a case of oblique fracture of the leg. Case non-suited. Proved that the bandages were removed by plaintiff. Cost Dr. Anderson \$500 to defend. Attending physicians in both cases poor, although Drs. Anderson and Stevens were both sued. Dr. S. Whitmore, of Gardiner, was sued because a patient of his died from the profuse hæmorrhage of a severed artery of the foot.

We are prosecuted for unavoidable accidents happening in an attempt to obviate the effects of congenital deformities. Dr. J. B. Pollard, of Orrington, was subjected to a reference suit for a vesico-vaginal fistula, occurring in a woman with deformed pelvis, delivered of a child with instruments. Instruments were used at the three previous births. Dr. Thomas Brown, of Paris, was sued for \$6000 in a case of vesico-vaginal fistula from malposition, protracted loss of water, prolonged pressure, and instrumental delivery. Settled it for \$300 and costs.

It cost Dr. N. P. Monroe, of Belfast, \$1000 to defend a case of purulent ophthalmia, with loss of sight, from getting lime into the eyes. Dr. Patten, of Monson, was sued for the treatment of a case of erysipelas. Could as well hold the mariner responsible for the disasters of the winds and waves. Dr. J. M. Jonah, of Eastport, was sued

¹ Concluded from page 23.

for dislocation of the hip, with fracture of the acetabulum and laceration, which he reduced. The bandages were removed, and he was not permitted to see it again. \$5000 claimed. Settled it for \$100 and costs. Patient poor. The most famous and yet the most provoking illustration of the injustice of malpractice suits is the case of *Lowell v. Drs. Hawks and Faxton* for dislocation of the hip; damages claimed, \$10,000; three trials, first verdict \$1900, second \$100, third disagreement as to Hawks. Faxton acquitted; entered neither party. Cost Lowell \$2000; he became bankrupt. It cost Dr. Hawks between \$2000 and \$3000 and years of hard labor to pay the costs of the suit. The two leading and opposing expert witnesses were Dr. J. C. Warren, professor of anatomy and surgery, Harvard Medical College, of whom Gross writes in connection with Physick, Mott, and Dudley, "America will not produce the like again;" and Dr. Nathan Smith, professor of anatomy and surgery, Yale, Dartmouth, and Bowdoin medical colleges, — "one of the most extraordinary medical men whom the country has ever produced." Drs. Hawks and Faxton claimed the reduction of a dislocation forward and downward into foramen ovale; limbs brought together and no lengthening. Fifteen days afterwards discovered some lengthening, and were in doubt as to reduction. Dr. Warren three months afterwards claimed a dislocation downwards and backwards into the lesser ischiatic notch, with three inches of lengthening. Failed to reduce; never knew one to be reduced after three months. Dr. Smith claimed "fracture of pelvis, length owing to preternatural relaxation and contraction of the muscles of the hip;" delay of eight weeks might be a benefit in reduction. Sir Astley Cooper's negative report on downward and backward dislocations was used on both sides. Hippocrates, Celsus, Petit, Boyer, Rees, Richeraud, etc., were cited on one side or the other. Some years later a post mortem proved all wrong. Dr. J. Mason Warren, in his *Surgical Observations*, describes it as follows: "The head of the bone lies almost immediately under the old acetabulum, perhaps a little forward of it." Where only ordinary skill is required by law in the treatment of injuries the lawyer should be held to some accountability in actions for causes which can't be determined except by a post mortem of his client. Dr. E. K. Prescott was sued for fracture of the tibia into the knee-joint. Verdict, \$400 and costs. Saw case but once, and thought it was not fractured. Could hardly expect a perfect result in such a case. Dr. Thos. Frye, of Rockland, was twice sued for fracture of the thigh, and twice threatened for fracture of the leg. Three of the patients were poor. He prevailed every time, but it cost him \$4000. It injured his practice and broke down his health. Damages as high as \$20,000 were claimed.

The most absurd suits are for warranty, because the very nature

of our business precludes any such idea ; and it is accusing us of idiocy or rascality to charge us with any such agreement. Dr. N. A. Herson, of Portland, was sued for fracture of the leg, involving the ankle, followed by rheumatic arthritis. Damages laid at \$5000. The doctor prevailed, and a new trial was denied. He was sued again for warranting a cure. Although this plaintiff was one of the nine who were able to pay taxable costs, it cost the doctor \$800 to prove the impossibility of a perfect result in such cases, and the absurdity of a suit for the warranty of an impossible thing.

My reports of the threatened cases are very imperfect, but I have been able to classify twenty-seven cases, as follows: Fracture of the thigh, oblique one ; fracture of the leg, six ; fracture of the ankle, one ; compound fracture of the leg and ankle, one ; fracture of the arm, two ; fracture of the fore-arm, two ; fracture of the elbow, three ; fracture of the wrist, one ; dislocation of the elbow, reduced, one ; dislocation of the elbow and wrist and fracture of the ulna, one, result good ; Hays' amputation of a gangrenous foot, one ; amputation of two fingers, slight necrosis following, one ; explosion of powder, causing the loss of both eyes, one ; injured leg, one ; still-born child, one ; craniotomy, one ; *medicine*, producing miscarriage, one ; causing hysteria, one ; injury to health, one ; sickness of daughter, one. Not one was able to pay the taxable costs of a lawsuit. Four of these surgeons were frightened into paying, because the costs of defense would be burdensome and the notoriety unenviable. One surgeon paid \$100 in case of shortening of a fractured leg between one fourth and one half inches, which was less than the average ; another surgeon paid \$50 in a similar case ; one paid \$100 for a fractured arm, and another paid \$250 for a fractured fore-arm. Not one dared to enforce his bill for services. If we are to pay for all still-born children, the next class of suits will be warranty in conception.

There is neither safety nor money in the practice of medicine, under the existing law. Either we must give up surgery entirely, or select, among reliable patients, cases which promise favorable results. The poor are a prolific source of malpractice suits, and so long as attorneys go unpunished for their black-mail attacks upon us we must leave the afflicted poor, as barbaric tribes do, to perish by the wayside, or for the towns and cities to take care of.

I took pains after my trials to classify and analyze the risks and profits of eighteen surgical cases taken from my books chronologically, selecting six each of cancer, amputation, and fracture : namely, the removal of six cancerous breasts ; the amputation of three thighs, two legs, and one arm near the shoulder ; and the setting of one compound comminuted fracture of the arm near the shoulder, one leg, one clavicle, one elbow, one arm, and one wrist. All made good recoveries,

excepting one amputation, to which I was called when the patient was *in articulo mortis*. I made 237 visits, traveled 764 miles, and received \$288.50 compensation. I averaged \$1.00 per visit including $3\frac{1}{4}$ miles travel. Valuing my professional services at \$30 per month, as I drove my own horse, I realized for the use of my horse and equipage \$2.00 per day for three months, the actual time consumed in this surgery, a portion being in the night in drenching rains, over sloughy roads, and through drifting snow-storms.

Under our laws I am liable to prosecution for malpractice in all these cases, as the unsightly scars of unrestored breasts and limbs and the imperfections of bony unions excite doubts of surgical skill and care. Based upon my experience I incurred the risk of suits for \$153,000, the loss of nine years' time, and the payment of \$18,000 in lawyers' fees and court costs, for which the prestige of surgery does not compensate. More than three fourths of these patients were poor, and would have gone to charitable institutions at a distance if I had not done the work cheap and taken what was voluntarily paid. The metropolitan cities get the surgery of the rich.

A law should be enacted which will protect us in the legitimate practice of our profession, and secure skillful treatment to our patients. The present law enables the poor patient to throw the entire responsibility upon the surgeon, and encourages negligence and disregard of instructions, in hopes that some slight deviation from perfect results will establish a claim against the surgeon for damages, the conviction prevailing, perhaps most markedly in fractures and dislocations, that the careful and skillful surgeon possesses the power to correct all deformities and cure all diseases.

The burden of proof virtually rests upon the surgeon. The laws of disease are ignored, and imperfect results are *prima facie* evidence of guilt. Constitutional infirmities and congenital deformities are no exception. Divine law, which says we are born heirs to disease, and nature's laws, which cannot perfectly restore solution of continuity and loss of substance, are forgotten. No mortal power can resist the contraction of a scar, any more than it can control the rending and lifting power of frost. Imperfect stumps, shortened limbs, deformed hands and feet, contracted tendons and rigid cicatrices, are in accordance with pathological laws, and as unalterable as astronomical, chemical, and mathematical laws.

It costs the poor man comparatively nothing, under existing laws, to prove a claim which has public sympathy and prejudice in its favor, and which the surgeon has to combat by an expensive elucidation of the general principles of the medical science, as we would the problems of Euclid.

In my club-foot trial, the jury were shown a boy born with de-

formed feet, which did not exhibit the marks of any surgical operation, but did indicate six years of parental neglect, and yet I had to send four hundred miles for my assistant, Dr. Jewell, to testify to a skillful operation, to Boston to prove the universal use of Scarpa's shoe in such cases, and for experts in and out of the State to demonstrate that I did not injure what did not show the marks of injury, that treatment often failed, and that it frequently required years of treatment by the parents, under the direction of a surgeon, to succeed. Should the law give a poor lawyer or a poor patient the power to put me to more court cost than any surgeon in this city can net in two years' of practice, without providing redress or the pledge of a single dollar as a guaranty of good faith in parading me before the courts to prove a negative? Are not our patients, our profession, and our country the sufferers?

In my second trial, Bowley, minus a leg, and a dependent wife with an infant at the breast, were flaunting witnesses of a great calamity. I had opened an abscess, he had lost a leg. The loss of a leg was a great misfortune; *ergo*, bad surgery was the cause of this misfortune, which I must disprove by two long, expensive, and tedious trials.

This case demonstrates the injustice of our statutes, which compelled me to prove, by expert testimony, that the physiological law of the gaping of incised wounds disproved the perjured loss of flesh, that the diseased joint existed prior to the alleged loss of flesh, and that the loss of a piece of flesh, as described, would not have injured a well joint. The plaintiff would not have put me to the expense of proving a *reductio ad absurdum* if the law had held him accountable for costs.

Skill in medicine is just as sensitive as capital in trade, and is bound to disappear under extra-hazardous risks. Barber phlebotomy, incantations, and the red-hot searing iron will inevitably displace surgery, or it will be confined to the rich, who cannot afford to prosecute the surgeon. The present law presents the singular paradox that those who can afford to pay for skilled labor cannot afford to sue, and those who can afford to sue cannot afford to pay for skilled labor.

The only remedy is a law which will compel the plaintiff to pay taxable costs in case of defeat. If the poor plaintiff proves his case, he gets paid for the cost of his suit, for the damages which he received, and bankrupts the surgeon; he exchanges place with the surgeon. The plaintiff carries around a lame leg, with the surgeon's money to support it, and the surgeon carries around a lame reputation, with nothing to support it. Such a law will teach the patient caution in selecting a surgeon, care in following directions, and hesitation in starting frivolous suits.

As it is now, the unfortunate patient tries to retrieve his bad luck

by levying upon the hard-working surgeon, without risking or staking anything for the chance of testing what may prove to be no case at all. He sues upon the principle of flipping the pennies, heads I win, tails you lose. The suit depletes the surgeon's pocket and ruins his reputation. To pay is ruinous, to defend is ruinous, and to live in constant dread is ruinous. It blunts the moral senses, distracts the mind, destroys the courage, and kills out laudable ambition by lessening the value of reputation and the security of property, besides keeping the surgeon in constant jeopardy of being robbed by every unprincipled patient or attorney who covets his fame or property. We should be put on an equal footing, at least, with our patients.

The objection raised to a malpractice law is that it is special or class legislation. Surgery is indispensable to the welfare and existence of the human race, and by saving life and utilizing labor it is a productive industry which needs the protection of a general law. It is a hazardous industry which cannot flourish without protection, and though by legislating for the general good it may secondarily benefit the surgeon, it is no more special or class in its privileges than the power accorded by law to lawyers to sue, arrest, and attach upon imaginary claims, and shift the accountability on to their worthless clients, or conspire with them for the ruin of our professional reputations with impunity, under the protection of "*privileged communication*." Better for the people to close up the court-houses than tolerate such *abuses*.

Towns are protected by special laws against the dangerous claims for damages on the highways. Previous notice of the defect and limited time to make complaint are required. No kind of a notice protects us, and the patient has six years after the accident and four after the death of the surgeon to prosecute for damages. Formerly, sheep were protected by a bounty on wolves and bears, until the latter were exterminated, and now the State proposes to exterminate the surgeons by a similar process.

We have game laws, fish laws, railroad laws, ice laws, nuisance laws, manufacturing laws, and insurance laws, and why not surgical laws? Is the porgie industry more valuable than the surgical, and protecting ice fields from kerosene more important than protecting surgery in its mission of mercy? Ohio, New York, Illinois, etc., have special laws regulating the practice of medicine. In New York, every physician must have a diploma from one of the accredited state institutions, and join the county medical society, or be prosecuted. A per cent. on the *ad damnum* is allowed in case of defeat. In Illinois, a physician cannot practice without a diploma. In Vermont, and I think in New Hampshire, itinerant physicians must be examined by a medical board. Michigan, Massachusetts, etc., have a general law requiring a bond for costs. Ohio gives special protection. In Maine, any one can

practice medicine and any one can sue the doctor without restrictions.

The lawyer has plenary power to arrest or bond the surgeon for appearance at court in his own defense and at his own expense, damage his reputation, wound his feelings and purse, for which the surgeon has no *redress* unless he takes it out of the lawyer's hide. If the plaintiff is a minor, the lawyer may sue in the name of the rich father whose pocket a judgment for costs cannot reach.

The demagogue claims that such a law would be a restriction upon the rights of the people. We have already shown that malpractice suits are without profit to the patient and oppressive to the surgeon, and that the right is merely nominal, because it does not pay. The vigorous enforcement of such a right would cut off the occasion for it and virtually abolish it, because the surgeon would abandon practice among the poor if he were held to an unnatural and ruinous accountability. The refusal of pretended friends to sign the plaintiff's bond would show hypocrisy, insincerity, and want of confidence in a suit in which the bondsmen could risk nothing if the suit were well founded. The plaintiff should not be permitted to inflict costs upon the surgeon for defending a prosecution presumably wrong. His claim is not for a debt contracted by the surgeon, but for an infliction of the Almighty or of the patient's imprudence, for the relief of which he is largely dependent upon the powers of nature. The surgeon does not contract to furnish anything more than a helping hand.

The purpose of law is to prevent encroachment upon the individual rights of person and property, and assert the presumption of innocence. It is not to protect the poor plaintiff, in frivolous suits for fancied grievances, against the equally poor defendant, and compel the innocent defendant, rich or poor, to pay the expenses of a prosecution unjustly forced upon him. The present law virtually forces the doctor to pay for his own defense, or be defaulted. If his means are limited he cannot secure able defense, by which he becomes deprived of the presumption of innocence, as he will have to buy off cheaply what he cannot afford to defend, and sacrifice the right to practice his profession with safety. It is a wrong to the doctor, the patient, and the community.

The poor are induced to abandon legitimate industries for litigation, in which failure costs nothing and success draws a prize. The law offers a premium on rascality which levies black-mail on the physician, who prefers to pay rather than contend at unequal odds with perjury. Without accountability for false swearing, the ignorant poor have a decided advantage over the physician. In my Bowley case, the judge charged that either Dr. Weston and myself committed perjury, or Finnegan, through ignorance, might be mistaken. It cost me more than

\$1000 to prove that this mistake was a deliberate falsehood. Is it to be wondered at that surgeons pay to be let alone, or that our courts swarm with unprincipled attorneys who seduce the poor into the delusion of litigation for the purpose of robbery, demoralize the people, and burden our counties with debt? The surgeon becomes sour and disgusted, and, in the flush of manhood, abandons the practice, or does timidly what requires zeal and courage to do well. He sees a poor-house or a jail constantly staring him in the face.

I have taken pains to collect and classify the opinions of the prominent medical men of this State upon the proper law, to guard the interests of the surgeon and the patient. I have received one hundred and fifteen reports: eighty-two are decidedly in favor of a bond for taxable costs; four, a bond for costs and remuneration to the surgeon for trouble, etc.; eleven had not matured an opinion; and sixteen were satisfied with the present law, guarded by the following qualifications, namely: one favored a better education of the masses in medicine; three, written exemptions from prosecution in doubtful cases; two, the jury one half or two thirds medical men; one, preliminary hearing; one, strict observance of medical ethics; three, higher standard of medical education, and a diploma, as an indispensable requisite; one, an expert law; one, abandon fractures and dislocations; one, common-sense jury; two, counsel and witnesses in all surgical cases: one, cover risks of prosecutions by adequate charges; and one, a dissection bill.

These reports show that seventy-five per cent. of the physicians of this State are in favor of a bond for taxable costs, thirteen per cent. advocate more protective measures still, while only nine per cent. are satisfied with the present law. With eighty-eight per cent. of the doctors opposed to the existing law, our law-makers may rest assured that it must be modified, or the poor will not get any surgical aid whatever, and the rich a poor quality at a very high price.

The thirteen per cent. who advocate the present law with restrictions suggest requirements more impracticable than the bond for costs. For instance, a better education of the masses in medicine, aside from other objections, would incur the risk of "a little learning is a dangerous thing." A written exemption from prosecution in doubtful cases would be impracticable in cases of extreme peril and suffering. A jury composed of one half to two thirds medical men would infringe upon an accepted principle that every citizen is a peer. A closer observance of medical ethics is a parody upon the proverbial jealousy of our profession. The reports of suits and threats show that ignorant and jealous doctors are invariably mixed up with designing and unscrupulous lawyers in these malpractice suits, making it all the more necessary that some law should be enacted to protect the good and

meritorious physicians and punish the wicked lawyers. A higher standard of education and a diploma are a burlesque upon the present statutes, which give budding genius the unrestricted right to practice medicine without any study. A common-sense jury is what the law presumes. Medical counsel in difficult cases is no protection whatever, as the counsel is as liable to be sued as the attendant, and more so if the richer. Higher charges to cover the risks is another way of refusing calls to the poor. The abandonment of fractures and dislocations is simply to give up surgery in the country. A dissection bill has failed.

An expert law would be an excellent thing. It would exclude from court the narrow-minded and ignorant men of our profession, and confine medical expert testimony to those whose pride and special qualifications would elevate them above small local jealousies and the prejudices of ignorance. The lawyer would be unable to use them, or turn their testimony to bad account, and the pay which they would be entitled to would secure good talent, capable of enlightening a jury. Under the present law, medical experts are permitted to testify upon subjects which, technically or practically, they never have had the chance or inclination to study, basing their qualifications upon an imperfect knowledge of a few general principles of an extensive science. In my club-foot suit, the most pronounced expert witness against me confessed that he had never operated on a club-foot, never fitted a shoe, and was unacquainted with the leading authorities on orthopædic surgery.

We failed to get a bill through the last legislature to protect the science and art of surgery, mainly through the instrumentality of a low grade of lawyers, who kept out of sight their selfish and material interest in defeating it. My only reply is: Let these humane and philanthropic legislators contribute a moiety of their time and money to the suffering poor; let them run for the doctor at night, requite him for his thankless service, and, as an evidence of their sincerity and faith, become surety for the malpractice suits which they delight to encourage; let them work without retainers, relinquish their preferred claims on unsettled accounts and insolvent estates; let them step forward and cast their bread upon the waters, take the same risk that we do of prosecution for their mistakes, and the same chances of getting their pay, and their hypocritical cant will vanish into thin air. Even modify the law so as to compel pettifoggers to give bonds for taxable costs in all actions which they encourage, where the plaintiff cannot, or is unwilling to, and then, when they throw their drag-net, the people will be prepared to meet the mischief which these natural enemies of prosperity and professional excellence are capable of doing.

I am satisfied that the people are with us. They realize the im-

portance of the medical profession, and the value of skilled and intelligent labor; they realize that the community need no better guaranty against malpractice than the educational record and the unrequited services of the self-sacrificing and devoted family physician, whose interests run *pari passu* with the patient's, and whose greatest reward is a consciousness of having met the approbation of his patrons and doing his work well; they realize that all laws which put the physician at the mercy of the pettifogger and the ungrateful patient simply discourage the doctor in well doing, alienate him from his patrons, and deny them, in hours of distress and affliction, good and willing treatment, which law cannot furnish, and cannot force the doctor to furnish, where it is not for his interest to furnish it.

Dr. Sanger offered the following resolutions, which were adopted unanimously.

Resolved, that, with the existing state laws on civil malpractice, it is unsafe to practice surgery among the poor.

Resolved, that a committee of five be chosen by this association to present the subject to the next legislature, and ask for proper legislation.

Petitions are being extensively circulated throughout the State and cheerfully signed by our citizens in support of a bill protecting the science and art of surgery.

OVARIAN TUMORS.¹

BY W. SYMINGTON BROWN, M. D., STONEHAM.

IN our day no department of surgery has made such gigantic strides as gynæcology, and no branch of gynæcology has progressed so rapidly as that relating to ovarian tumors.

Ovariectomy, or, as some have called it, oöphorectomy, was first performed by Dr. Ephraim McDowell, of Kentucky, in 1809. He operated thirteen times, with eight recoveries. Dr. Henry J. Bigelow operated unsuccessfully in 1849. Dr. John L. Atlee, Sen., performed the first case of double ovariectomy in 1843, on a maiden lady, twenty-five years of age, who recovered, and was still living a few months ago. His brother, the late Dr. Washington L. Atlee, operated for the first time in 1844, unsuccessfully. Since then he has had over three hundred and sixty cases, a larger number than any other American surgeon, with about seventy per cent. of recoveries. Dr. Gilman Kimball, of Lowell, performed his first ovariectomy in 1855, and since then has operated over two hundred and thirty-six times. In 1847, Mr. H. E. Burd reported a case successfully performed during pregnancy. The patient aborted two days after the operation, but gave birth to a healthy

¹ Read before the Middlesex East District Medical Society, October 16, 1873.

child seventeen months afterwards. Dr. Charles Clay, of Manchester, deserves the credit of giving the original impetus to ovariectomy in Great Britain. His first operation was performed in 1842, and was successful. Up to the end of 1871 he had operated two hundred and fifty times, with nearly 73 per cent. of recoveries. But to Mr. T. Spencer Wells, of London, and Dr. Thomas Keith, of Edinburgh, belong the honors of being the most celebrated and successful operators in our day. I have just returned from visits to these distinguished men, and shall try to convey to you as accurate an idea as I can of the impressions produced.

Mr. Wells was originally a surgeon in the British navy, and afterwards served in the Crimean war during 1855 and 1856. He commenced his remarkable career as an ovariectomist in February, 1858, and during the first three years operated on ten cases only. Since 1858 he has operated nine hundred and eleven times! Of his first five hundred cases three hundred and seventy-three recovered. Of his last series of one hundred cases eighty-three recovered. In that series he had twice a run of twenty-seven cases without a single death, and once a run of twenty-one successful cases. The following is a brief summary of Mr. Wells's mode of operating:—

(1.) He uses a mixture of chloro-methyl vapor and atmospheric air (containing from two to four per cent. of the vapor) as an anæsthetic. It is administered by means of Dr. Junker's apparatus. The operation is performed on a table, to which the patient is fastened by a strap over the thighs. The abdomen is covered with a thin sheet of rubber cloth, long enough to allow of its being held up so as to protect the patient's face from the spray, and with an oval opening eight inches long by six inches wide in the middle. This opening is coated all round with adhesive plaster, so that it may adhere to the skin. (2.) He is exceedingly careful to secure clean quarters, clean air, clean instruments, and clean assistants. (3.) He uses the antiseptic spray (one of carbolic acid to twenty of water) during the whole operation. All the instruments, ligatures, and sponges are immersed in a similar solution. The operator and his assistants bathe their hands in another portion of the same solution. (4.) He endeavors, if practicable, to limit the length of the incision to six inches, and does not allow the fluid of the cyst to enter the peritoneal cavity. (5.) In all suitable cases, in securing the pedicle, he employs the clamp in preference to the ligature; in other words, he prefers the *extra*-peritoneal to the *intra*-peritoneal method. (6.) But if, on account of the pedicle being too short, thick, or broad, the *intra*-peritoneal method is adopted, he always uses a *blunt* needle to penetrate the pedicle, which is tied in two or more portions and cut off at some distance from the ligature. (7.) The greatest pains are taken to cleanse the abdominal cavity. Soft sponges are used for this purpose. A large

flat sponge is then slipped in over the bowels, and the wound sewed up. Ligatures of strong Chinese silk, about eighteen inches long, are threaded at each end with a medium-sized needle. Each needle is introduced from within outwards, *including the peritonæum*. When the whole number required have been inserted, the lips of the wound are separated to remove the flat sponge (which receives drops of blood from passing the needles) and to ascertain that no blood, serum, sponge, or forceps have been left in the abdominal cavity. The sponges and forceps (to arrest bleeding during the operation) are counted before and after the operation. (8.) He places a dry dressing of thymol cotton over the external wound; then long strips of adhesive plaster (going two thirds of the way round) are applied, and the whole abdomen is supported by a broad flannel bandage.

But no words can express his wonderful skill in diagnosis, his adroitness in operating, his coolness and self-poise in emergencies, and above all the confidence which his mere presence inspires in the patient.

Mr. Wells has performed ovariectomy *a second time on the same patient* in eleven cases, nine of whom recovered. He always examines the other ovary before closing the wound, but prefers to leave it unless seriously diseased. He has also operated in ten cases of ovarian tumor *in which the patients were pregnant at the time*, nine of whom recovered. One of the points especially deserving notice is the fact that Mr. Wells not only reports all his fatal cases, but faithfully prints even his mistakes and accidents (such as leaving at one time a sponge and another time a pair of forceps in the abdominal cavity). He takes especial pains to ascertain the subsequent history of all his patients, and records the details with a minuteness which has never before been attempted in any department of surgery. It has more than once been broadly hinted that he selects his cases with a view to favorable statistics; but nothing could be farther from the truth. He says: "I have operated lately, and shall soon be driven to again, in very unfavorable cases—cases almost hopeless—by the feeling that it is impossible to resist the prayer of a dying woman to try and save her life."

Dr. Thomas Keith, of Edinburgh, performed his first ovariectomy in 1863. Since then, up to last July, he has operated two hundred and seventy-three times. Up to the close of 1871 he had operated one hundred and thirty-six times, of whom one hundred and eleven recovered. "There were but three monocysts in the first one hundred cases." The late Dr. Peaslee truly says: "Since the reports of his cases show that they have by no means been usually of a promising character, but very often quite the reverse, to him must be awarded the highest order of skill, both as an operator and in the after-treatment of cases." This was written in 1872. Since then his success has been still greater, as the following facts show: of the last one hundred

cases ninety-three have recovered ; during the last seventy cases only three deaths have occurred ; and of the last thirty-six cases *all* have recovered.

I had not the pleasure of seeing Dr. Keith operate, because he had no patient during the short time that I was in Scotland, but he showed me his instruments, explained his method, and took me to his private hospital, where I saw the patient he had operated on two weeks before. Dr. Keith uses sulphuric ether exclusively as an anæsthetic, preferring it to chloroform, as safer and less likely to be followed by emesis. I asked him if he could tell me on what his great success depended. He replied, "Just cleanliness." But without doubting that the extraordinary pains taken to insure cleanliness tell markedly on the result, I am satisfied that even more depends on his personal magnetism — the absolute confidence which the patient reposes in his extraordinary skill and judgment.

Dr. Peaslee says of him : "When he had operated one hundred and thirty-six times, he had never made a mistake in diagnosis." He has now performed ovariectomy two hundred and seventy-three times without making a mistake in diagnosis. He often operates on the most desperate cases. He says : "Ten years ago (1864), when cases of ovariectomy were few, a young woman in the last stage of ovarian disease came to me a long journey from the north. She arrived completely worn out. It did not seem possible that in such a condition life could be prolonged many days, for the pulse was almost imperceptible, there was vomiting and diarrhœa, œdematous limbs, and albuminous urine, while a profuse fœtid discharge was going on from an opening near the umbilicus. . . . To remove a putrid cyst in such a condition of feebleness did not at that time even occur to me ; yet since then I have operated more than once under circumstances not less unfavorable. Soon again (December, 1864) there came another case of very large tumor. The patient had been jolted for some hours in a coach, and in the hope of relieving the pain thus set up tapping was performed after her arrival. The pain was not relieved, abdominal distention from flatus became excessive, and typhoid symptoms rapidly set in. Fearing a repetition of the slow-death process, ovariectomy was performed during the semi-delirium of septic fever. This was probably the first time that surgery broke in upon an acutely inflamed peritonæum. Recent lymph was present everywhere ; adherent bowel and mesentery hedged in a thick-walled cyst, the base of which was in a complete state of slough. Inflammation had gone on to gangrene, and there was intense putridity. After an operation which went on for two hours the patient was placed in bed, — cold, vomiting, and nearly pulseless. It seemed as if we had simply killed her ; yet she got rapidly into heat, the restless delirium at once disappeared, and there were warm perspirations, much sleep, and

a recovery without a drawback. Since then I have ten times met with cases of acute suppurating cyst. Of the ten acute cases operated on eight recovered."

Dr. Keith uses the antiseptic spray in the same way as Mr. Wells. He is assisted by surgeons engaged in general practice, — often just from the general hospital, — and he insists only on thorough cleansing (washing the hands and using the nail brush in carbolic acid solution) before handling the patient. Every instrument used in an operation is first washed in the antiseptic fluid, then taken to pieces (for example, forceps) and polished as carefully as when it left the maker's hands.

I visited the hospital in which the majority of his operations have been performed. It is a private house in an airy part of the city, and it is a singular fact that his success has been even greater here than in the patients' own houses. Dr. Keith devotes a great deal of care and attention to the after-treatment, and this can be more thoroughly attended to in a small private hospital than at home.

The time has gone by when the operation needs to be defended. The splendid results already detailed sufficiently demonstrate its "right to be." But there are a few facts and inferences deducible therefrom to which I may be allowed to call your attention. In a recent lecture before the Royal College of Surgeons, Mr. Wells says: "Ovariectomy more certainly saves life from threatened death, restores a woman more certainly to perfect health, renders her more fit for all the requirements of daily life, than almost any other surgical operation. She can scarcely be said to be mutilated; she may menstruate regularly, and bear children of either sex, or twins, without any unusual suffering either during pregnancy or labor. Lord Selborne showed the total gain of life of the three hundred and seventy-three survivors of my first five hundred operations to be ten thousand eight hundred and seventeen years of average healthy life, instead of the one thousand four hundred and ninety-two years of miserable endurance which they might have passed before death without operation. Of the four hundred patients operated on since the five hundred, three hundred and six are cured, making the total recoveries six hundred and seventy-nine. Multiplying this number by twenty-nine years, the average estimated gain of each patient, the total gain amounts to nineteen thousand six hundred and ninety-one years." At least an equal number of lives have been saved in America by ovariectomists; so that in round numbers forty thousand years of life have been gained by the operation in England and America.

Another interesting point is the fact that menstruation may continue for years after *both ovaries* have been removed. The late Dr. W. L. Atlee, in his work on Diagnosis of Ovarian Tumors, gives the details of three cases in which there could be no doubt that menstruation con-

tinued after the removal of both ovaries. Mr. Spencer Wells removed both ovaries at once in twenty-five cases. He says: "Many of these double operations have been performed in women past the age of menstruation; but in several cases young women have had both ovaries removed, and in them there has been no return to menstruation as a rule. *In three young women there has been a periodical return of something like menstruation, if not true menstruation.*¹ From circulars returned to me, and from other sources, I am able to say that thirty-five women who were unmarried at the time of the operation have married since; that fourteen have had one child; six, two; three, three; and three, four children. Two have had twins. Of two hundred and fifty-nine women who were married when the operation was performed, twenty-three have had one or more children since. . . . I have ascertained from the husband or medical attendant of some of my own patients that sexual desire and gratification have certainly not been less than before operation. In several patients whose menstruation before operation had been painful and irregular, it became quite regular and normal afterwards."

RECENT PROGRESS IN OTOLOGY.²

BY J. ORNE GREEN, M. D.

Sewer Gas and Ear Disease.—A number of observations are given by Cassells,³ which go far to show that sewer gas may exert a very deleterious influence on the ear, — may in fact be the direct exciting cause of inflammations of the tympanum and of catarrhal inflammation of the naso-pharynx. Although these cases cannot be referred to the group of aural affections, described above by Weber-Liel, they are closely allied to them.

The first cases described by Cassells occurred in his own family. He had noticed for some weeks that the air in his nursery was not perfectly pure, without, however, suspecting the drainage. His three children, during this time, appeared unwell, but the only affection that could be found was slight pharyngeal catarrh. One after the other, within a short time, these three children now suffered from acute inflammations of the tympanum. The repeated attacks in all the children led to an inspection of the house, when it was found that there was an escape of sewer gas from the water-closets near the nursery; this being remedied, the health of the family has since been perfect. A short time after this Cassells saw three ladies in one family, all of whom were complaining of occasional dullness of hearing and slight

¹ Italics are mine.

² Concluded from page 23.

Edinburgh Medical Journal, April, 1878.

naso-pharyngeal catarrh. The room in which they chiefly spent their time had been noticed to have a disagreeable smell, dependent, as it afterwards was determined, upon a defect in the soil-pipe. All were completely restored, without other treatment, by quitting the infected house for a short time. Another case was that of a lady who suffered from an affection of the ear and general malaise; on leaving home she soon became perfectly well, but all the first symptoms returned on again occupying her own house, to disappear with a second absence. In the mean time defective drainage had been discovered and remedied. Other cases are given of a similar character, which strongly suggest that sewer gas may be an exciting cause of some of the milder forms of inflammation of the mucous membrane in the throat and ear; but this cannot, however, be considered as proven, for it should be remembered that it is an established fact that many cases of acute and subacute catarrhal inflammations are benefited or cured by a change of air alone, be it from the city to the country, from the sea-shore to the inland, or *vice versa*.

Trophic Disturbances in the Tympanum from Section of the Medulla Oblongata.—In connection with the explanation of Weber-Liel that otitis intermittens is due to trophic disturbances from injury of the trifacial nerve, an observation of Gellé¹ is of interest. After section of the medulla oblongata of a dog, he found the tympanic cavity on the same side as that operated upon filled with an opaque fluid containing pus cells, in marked contrast to the tympanum on the opposite side, which was free from secretion and with a thin, pale mucous membrane. He considers that the changes were caused by the injury done to the descending branch of the trifacial nerve in the medulla oblongata by the operation, and were in fact neuro-trophic disturbances in the tympanic mucous membrane.

Bromide of Potassium the Cause of Otitis Externa Circumscripta.—Grüber² calls attention to the observations of Neumann on the eruption produced by bromide of potassium: namely, that it is closely allied to acne simplex; that it appears on the shoulders, chest, face, and forehead in the form of papules and pustules, and is sometimes accompanied by fever; that the eruption generally appears in the hair follicles; and that the secretion consists of pus and smegma. He then narrates two cases which had come under his own observation, in both of which there were a number of furuncles in the meatus; both patients were taking the bromide of potassium, and both showed the characteristic eruption on the forehead. In the first case the furuncles recurred with great obstinacy, until the bromide was given up, when there was no further relapse; the second case was seen but once. Both cases Grüber regarded as

¹ Gazette médicale, No. 1, 1878.

² Allgemeine Wiener med. Zeitung, No. 41, 1878.

otitis externa circumscripta, produced by the internal administration of bromide of potassium.

Softening of the Ossicles. — Hartman¹ narrates an unusual case of extreme decalcification of both stapes which occurred in a soldier who had suffered for many years from chronic purulent inflammation of both tympana. He died from chronic phthisis, and the autopsy revealed the extensive destruction in the tympana so common with chronic otorrhœas, and in addition the crura and heads of both stapes were so extremely soft that they could be bent in any direction; the bases of both stapes retained their normal firmness. As a careful examination showed a considerable spot of decalcified bone in the squamous portion of one os temporis, Hartman considers that the condition of the stapes was caused by the marasmus accompanying the phthisis and not by otorrhœal secretion.

Abscess of the Cerebellum rupturing into the Ear. — Gribbon² narrates a case of this very rare termination of an abscess of the brain, and it is greatly to be regretted that a little more thorough dissection was not made to show the exact spot through which the discharge took place into the ear. A soldier, twenty-two years old, had had purulent inflammation of the right tympanum for a long time, the drum membrane on this side being entirely destroyed. Eight days before his death he gave up duty, complaining of headache and pain in the ear, which continued without being relieved by any medication. As he was being raised in bed suddenly a stream of pus flowed from his right ear, and he died within one minute. The autopsy showed that the whole cerebellum, except the anterior third of the middle and left lobes, was converted into a fœtid abscess, which had ruptured directly over the meatus auditorius. No dissection of the petrous bone to discover the existence of caries, or to find the course of the pus from the brain into the ear, appears to have been made, but from the preceding otorrhœa, and the sudden free discharge of pus evidently through some large communication, it is probable that carious destruction of the bone, either the roof of the tympanum or the inner wall of the mastoid cells, had already taken place before the rupture.

The case in none of its features can be regarded as a primary inflammation of the brain, any more than one or two others which have been reported within a few years, where neglect to examine the ear, both during life and after death, destroys the scientific value of the case. This report of Gribbon adds another to the many already published, showing how slight the symptoms may be when even a large portion of the brain is disorganized. In this case the soldier was on duty till eight days before death, and the only symptoms complained of

¹ Archiv für Ohrenheilkunde, vol. xiii., page 259.

² Lancet, No. 20, 1878.

were headache and muscular weakness; the amount of disintegration of brain substance and the only symptom complained of, which existed for some time before his giving up duty, namely, a sense of weight in the head, would show that the pathological process in the brain must have been going on much longer than these eight days.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

T. M. ROTCH, M. D., SECRETARY.

MAY 25, 1878. Fifty-eight members were present, the president, DR. HOMANS, in the chair. The records of the last meeting were read and accepted.

Medical Library.—The committee on change of rooms reported that the Boston Medical Library Association had purchased rooms wherein the meetings of the different societies could be held; the committee recommended the society to authorize the treasurer of the Suffolk District Society to terminate the lease of the rooms then occupied by the society, and to enter into negotiations for the new rooms, provided that the other societies did likewise.¹

Hernia.—DR. H. O. MARCY read a paper on the radical cure of hernia by the antiseptic use of the carbolized catgut ligature. Reserved for publication.

Sun-Spots and Epidemics.—DR. E. W. CUSHING read a paper on sun-spots and epidemics, tracing the relation between the great epidemics which have devastated the world from the time of Homer down to the present century, strange natural phenomena either heralding or accompanying them; showing, also, that the epidemics are now known to depend on or at least coincide with the changes of solar energy, corresponding with the sun-spot cycle.

Color-Blindness.—DR. B. J. JEFFRIES read a paper on the Relative Frequency of Color-Blindness in Males and Females.² Dr. Jeffries then explained the various recently proposed tests for color-blindness, showing each and discussing its merits, after the methods of Stilling, Donders, Daac, Cohn, Dor, and Holmgren, the last being the selection and matching of colored worsteds; he considered this test the most practical, the simplest, and surest. The correctness of his extended remarks was exemplified by testing practically a red-blind member of the society present, who verified all that was said by his own account of his color-blindness and his attempts to obviate his misfortune, as also by his peculiar selection of the worsted in exact accordance with the speaker's report regarding the color-blind amongst the ten thousand persons he had tested by this method of Professor Holmgren, of the University of Upsala, Sweden.

¹ Since the above was written all the societies have voted to meet in future at the hall of the Library Association.

² Published in the JOURNAL, July 25, 1878.

QUARTERLY MEETING OF THE RHODE ISLAND MEDICAL SOCIETY.

THE regular quarterly meeting of the Rhode Island Medical Society was held in Providence, December 18, 1878, the president, Dr. E. T. Caswell, in the chair. The committee appointed at the last meeting to make collections for the benefit of the families of physicians at the South who died from yellow fever during the late epidemic reported that they had collected and forwarded to the secretary of the Mississippi Medical Society the sum of one hundred and twenty dollars.

Upon recommendation of the board of censors the following gentlemen were admitted to membership: J. B. Chapin, W. H. Greene, F. H. Rankin, of Providence, C. B. Mathewson, of East Greenwich, and W. S. Smith, of Scituate.

The president announced the recent death of Dr. S. Augustus Arnold, the oldest Fellow of the society, and in a few well-chosen remarks paid a fitting tribute to the character of the deceased. A committee was appointed to draw up a series of suitable resolutions to be placed upon the minutes of the society. This committee subsequently reported as follows:—

“Within a few days before this meeting, on the 12th day of December, the oldest Fellow of this society has been removed by death. Dr. S. Augustus Arnold was admitted as Fellow in 1822, and during the long period of fifty-six years has been an active member, partaking often in our discussions, holding many offices of trust and responsibility, and serving as president in the years 1849 and 1850.

“The announcement that this long association is to exist no more, and that his useful and honorable life has come to an end, cannot be received by us without deep regret. We desire to place on permanent record our appreciation of his fidelity to his convictions, his integrity and consistency of life, his earnest devotion to the profession of medicine, and his important services not only to our society, but to the community in which he lived.

“It is therefore voted that this minute be entered on our records and communicated to his surviving children, with the assurance of our sincere sympathy in this sudden and irreparable loss.

CHARLES W. PARSONS.

ARIEL BALLOU.

JAMES H. ELDREDGE.”

Medical Witnesses.—Dr. Turner, of Newport, made some remarks in regard to the compulsory attendance of physicians as witnesses in courts. He thought that some action should be taken to provide a law, if possible, by which courts should have discretion to allow a reasonable compensation, as is done in some other States. In the present state of the law in Rhode Island it frequently works great hardship in compelling long attendance with no adequate pay.

Dr. Garvin, of Lonsdale, in the course of remarks upon the same subject stated that on one occasion, being under summons to attend court at a certain hour, he found himself at that time in the midst of a case of labor, which of

course he could not leave. On his arrival at court, half an hour late, he was informed that a writ had been issued for his arrest. But upon explanation of the circumstances he was allowed to escape further penalty upon payment of costs.

Upon motion of Dr. Turner, a committee consisting of Drs. Garvin, Kenyon, and Dedrick, was appointed to inquire what measures could be taken to procure legislation that would remedy this evil.

Metric System. — The report of the committee upon the adoption of the metric system was read by Dr. J. W. Mitchell, of Providence. Upon recommendation of this committee, a resolution was adopted that on and after January 1, 1880, the metric system should be used by the Fellows of this society in the writing of prescriptions.

Medical Examiners. — Dr. H. W. Williams, of Boston, was introduced, and gave an account of the recently established system of medical examiners in the State of Massachusetts. He described the workings of the new law, and demonstrated fully its superiority over the old coroners' inquests.

Catarrh. — Dr. H. G. Miller, of Providence, made some remarks upon the treatment of naso-pharyngeal catarrh. He deprecated the use of saline and other liquid applications by means of the nasal douche, as liable to produce injury of the middle ear. He recommended that all remedial agents should be applied in the form of dry powder by insufflation.

Dysmenorrhœa. — Dr. Virgil O. Hardon, of Providence, read a paper upon Mechanical Dysmenorrhœa. He described the symptoms and pathology of this affection, and advocated the treatment by incision of the cervix uteri after the manner of Sims. He cited a number of cases from his own practice which had been successfully treated in this way. This paper was followed by an animated discussion. Most of the participants were of the opinion that in the majority of cases of mechanical dysmenorrhœa an operation is not necessary, but that relief may be obtained by dilatation of the cervix uteri or by the use of anodynes.

Diphtheria. — Dr. J. O. Whitney, of Pawtucket, read an elaborate essay upon Diphtheria, in which he brought forward some novel ideas in regard to the ætiology and pathology of the disease. He maintained that there is but one pseudo-membranous disease, which has at different times borne a variety of names, such as diphtheria, croup, putrid sore throat, membranous laryngitis, cynanche maligna, etc. It is contagious or infectious in proportion to its visible putridity in individual cases, the contagious principle existing both in the breath of the sick and in the more solid discharges from the affected surfaces. It is primarily a local disease, the constitutional results depending upon absorption of the decomposed membrane. One attack gives no protection against a future attack.

The meeting was then adjourned, the society accepting a cordial invitation from the president to partake of a bountiful repast furnished by him at his house.

THE AMERICAN QUARTERLY MICROSCOPICAL JOURNAL.¹

THERE seem to be two ways open to those who desire the improvement of the microscope; historical proof of this statement is afforded by the classification of "Continental" and "Anglo-American" instruments which has always obtained. The characteristic of the Continental method has been the secondary position of the manufacturer; he has worked according to the intelligent demands of men who from K  lliker to Ehrenberg knew exactly the kind of instrument that they needed. The characteristic of the Anglo-American method has been the prominent position which the manufacturer himself has occupied in stimulating among the public—learned and otherwise—a taste for technical excellence which but few observers have been able to utilize. Few who wish to be considered patriotic would care to dispute the pre  minence of American objectives; few who wish to be considered sane would deny the superlative value of Anglo-American glasses; at the same time we must allow that the greatest development of histology, in fact of all branches of science, has been accomplished by means of the inferior Continental instruments. Our superiority in objectives has been attended principally by a simple joy in possession, or at most by such an employment as that which resulted in the ecstasy of the Rev. Mr. Cook after gazing through the seventy-fifth.

A similar distinction may be made between Continental and Anglo-American microscopical journals: in Germany the anatomical, botanical, and other special journals have absorbed the material that in England and America has gone to form a microscopical journal, leaving, perhaps, a certain amount of microscopical literature for society proceedings; England and America, on the other hand, have witnessed the rise and fall of a number of journals of this class.

When we compare the following words of an editorial of the new quarterly,—“This leads us to a statement of what, in our opinion, a microscopical journal should be. Recognizing the value of microscopical study in the various branches of natural science, such a journal should aim to publish the results of research carried on with the microscope in every department,”—with the only article that we feel specially capable of appreciating, we feel afraid that the zeal of the editor has directed the aim of the journal almost too high for success; that originality and real character will be sacrificed in attempting to publish results of research in every department. We believe that a recent decrease in English microscopical journalism was caused by the futility of such an attempt, and that prudence would counsel a more limited endeavor.

We express our opinion, however, with the utmost good will toward our latest and fairest attempt at microscopical journalism; if it fails to select the most scientific of anatomical and physiological papers it will without doubt do much to cultivate among its medical readers a generous interest in other departments of research, and, we hope, increase the amount of popular interest in the observation of nature.

¹ *The American Quarterly Microscopical Journal*. Volume I. No. 1. October, 1878. Containing the Transactions of the New York Microscopical Society. Edited by ROMY HITCHCOCK. 150 Nassau Street, New York.

HOLDEN'S OSTEOLOGY.¹

THE superlative merits of the plates of this work and the pleasant style in which it is written have atoned for many deficiencies both in accuracy and fullness. We do not intend to imply that the text has been bad, but only that it has not been *very* good. The present edition is in many respects much better than its predecessors. It has been carefully revised; several additions and one most judicious omission have been made. An admirable plate has been added to illustrate the structure and development of bone, and there are also new wood-cuts for the same purpose. The chapter on this subject, though not exhaustive, is very satisfactory. We do not think it necessary to record the various technical criticisms we could make. The text, though not all it might be, is on the whole good, and can be safely recommended to students. We regret that the author devotes but a few words to the internal architecture of bone, and says nothing at all of it in describing the individual bones. This certainly, in view of many recent researches, is a serious deficiency. We must protest also against having Hutchinson's impossible theory of the action of the intercostals presented without a word of apology, or as much as a hint that its correctness has ever been questioned. The omission which delights us is that of the chapter on transcendental anatomy. Both students and teachers can employ their time better than in endeavoring to free the poor archetype from the mass of error and jargon that covers it.

T. D.

HILTON'S REST AND PAIN.²

THIS work is one of that class which makes reputations, its author being better known in this country for the valuable series of lectures he has published on this subject than for any other of his professional labors. To those who are not familiar with the book we would explain that this is not a compact little monograph on what might be supposed to be an easily handled subject, but a series of eighteen lectures illustrating the advantage of the applications of dry anatomical facts, too frequently forgotten by the surgeon by the time his experience is mature, to carefully prepared clinical studies. The relation of nerves to diseased organs, the condition of the nervous centres and the joints in surgical disease, the significance of pain as a symptom of disease, and the great value of rest as a fosterer of repair, or as a maintainer of the healthy action of an organ, are some of the points illustrated by a large number of cases and a generous supply of wood-cuts. The appearance of the book in its present form adds to the interest with which it will be received. It is the first of the new monthly series of Wood's Library of Standard Medical Authors, which is to be issued at such moderate prices as to place these

¹ *Human Osteology*. By LUTHER HOLDEN, F. R. C. S. Fifth Edition, revised by the author, with the assistance of ALLAN DORAN, F. R. C. S. With numerous illustrations. Philadelphia: Lindsay and Blakiston. 1878.

² *On Rest and Pain*. A Course of Lectures on the Influence of Mechanical and Physiological Rest in the Treatment of Accidents and Surgical Diseases, and the Diagnostic Value of Pain. Delivered by JOHN HILTON, F. R. S., F. R. C. S. Edited by W. H. A. JACOBSON, F. R. C. S. Second edition. New York: William Wood & Co. 1879.

books within the reach of those who have hitherto been unable to indulge in many of the more valuable writings of the day on account of their expense. It is part of the general movement to popularize literature of the highest order which should meet with universal encouragement.

JOHN BARNARD SWETT JACKSON.

THE death of Dr. Jackson comes upon us as a loss we had little contemplated and for which we were quite unprepared. Age had not left him unchanged, but it had never subdued his elastic and almost youthful nature. A sudden and brief illness, attended with less of suffering than that which we are too often called to witness, ended in a few hours of unconsciousness, followed by a quiet release.

No man has ever died among us who has been more universally loved and respected, or whose loss has been more felt than his will be by the members of the profession to which he belonged. He was less widely known to the community at large than many others, but it would be safe to say that no one ever heard his name mentioned but in tones of kindly regard, or his character referred to except as that of a man without guile, true as truth, pure as purity, honest as Nature herself, whose works he studied. It may sound like extravagant language to claim so much for him, but he was quite exceptional in the singular child-like simplicity and transparency of his character, and in using the expressions here applied to him it is only among those who did not know him that such words need fear questioning comment.

Born in Boston in 1806, he graduated at Harvard University in 1825, and took his medical degree in 1829. In 1847 he was appointed to the Professorship of Pathological Anatomy in the Medical School of the University, which office he held at the time of his death.

The class to which Dr. Jackson belonged in college numbered many distinguished names. At the head of it stands that of Charles Francis Adams, the man in whose firm hand the country felt its dignity and honor safe in the most perilous moments of its long agony. Admiral Charles Henry Davis, who united great scientific acquirements to the distinction he gained in his profession; Judge Ames, of the Supreme Court of the State; the Reverend Drs. Hedge and Lothrop, conspicuous among the clergy; the distinguished astronomer, Sears Cook Walker; John Langdon Sibley, as true-hearted an enthusiast in his Library as Dr. Jackson was in his Museum; Dr. Augustus Addison Gould, beloved as a practitioner, highly esteemed as a man of science,—all these names are in the list of graduates of 1825. Not one of those whose names are mentioned, living or dead, was more faithful in the task to which he set himself than our patient, unwearied Curator, our sincere and devoted teacher.

It was not as a practitioner that Dr. Jackson was chiefly known. He was not in all respects fitted for the every-day work which belongs to that laborious calling. He was perhaps too sensitive, and, if such a word may be ventured, too scrupulous, to work quietly and easily to himself, which is one great condi-

tion of success. A great physician must have something of the great general about him, and more than one great general has left it on record that he could get a good nap on the battle-field in the interval of its decisive moments. The singular delicacy of Dr. Jackson's nature stood in the way of his success in the rough out-door world where men are necessarily jostled together in competition. With his vast knowledge of disease it might have seemed that he would be wanted everywhere in consultation. Perhaps he knew too much; knew the tricks of nature which baffle the most skilful diagnosticians too well to speak with that positiveness which is often decisive, in virtue of its personal emphasis, in cases where doubts are plenty and convictions feeble; where in the words of the great old master "the moment is pressing, experiment dangerous, judgment difficult."

It was not in the routine of medical practice that Dr. Jackson won that great reputation which reaches all over the land, and beyond it, wherever pathological science is cultivated. He studied disease in its effects upon the organs. There was a long series of years during which the ruined or injured vital machinery of our fellow-citizens, the cause of whose death was asked by those interested, was almost certain to pass under his thorough and careful inspection. The results he found in each case he minutely recorded. The history of the disease he took the greatest pains to learn. What Morgagni did for Valsalva he did for the whole medical profession of our city. In this way he accumulated a great mass of original materials, fresh transcripts from nature, which as far as they professed to go would be more likely to gain than lose by comparison with the famous works of an earlier day, the *Sepulcrum* of Bonetus, the great treatise *De Sedibus et Causis Morborum*, or the *Clinique Médicale* of Andral.

"As far as they professed to go." There is no propriety in comparing pathological anatomy as Dr. Jackson studied it with the pathological histology of a later epoch. He was not a microscopist. The telescope of the infinitesimal universe had not perfected its eyesight until long after he had become an adept in studying the larger aspects of diseased structure. What he knew he knew thoroughly, but he never pretended to have the slightest knowledge beyond what his honest naked eyes could teach him. He was not ashamed of their nakedness: in fact it was next to impossible to coax him to look through a microscope,—he would turn away with "I know nothing about it," in a tone that implied he did not want to have anything to do with it. But these same honest eyes of his were very keen ones, and saw things with about as little of chromatic or other aberration as any that have opened to our daylight. His look penetrated like an exploring needle, and many a tympanitic fancy of careless observers has collapsed under its searching scrutiny.

This is not the place to do more than allude to the record he has left of himself in medical literature. For half a century he has been at work among us, and the inventory of his finished labors, were it made out in full, would astonish many of those who have seen him only when he was busied with some of those smaller tasks in which he was punctilious to an extent that now and then provoked a good-natured smile. He had the true genius of a curator, and was never tired of working at his specimens, to get them into the best condition and show them off to the best advantage.

To know what he accomplished one must visit the Cabinet of the Society for Medical Improvement. This was the child of his affections. It owed its being to him far more than to any other, — perhaps than to all others. During its earlier years, at least, he was the life and soul of it, and it never lost its hold on his paternal interest. In 1847 he published a Descriptive Catalogue of this museum in a volume of three hundred and fifty pages. It was of this work that a distinguished Philadelphia professor spoke as being the most valuable contribution to pathological anatomy made up to that date in this country.

In this same year, 1847, the late Dr. John Collins Warren presented his large collection of pathological and other specimens to the Medical College. Dr. Jackson had no sooner entered on the duties of his professorship, to which was annexed the curatorship of the Warren Museum, than he began a long series of labors upon the preparations, having reference to their preservation, their proper arrangement and display, and, so far as possible, the obtaining of information as to their history. This was continued most patiently and diligently for more than twenty years, until, in the year 1870, Dr. Jackson published his Descriptive Catalogue of the greatly increased Warren Anatomical Museum in an octavo volume of seven hundred and fifty well-filled pages.

These "Catalogues" are much more than the words might lead one who read the titles on their backs to infer. A very large amount of valuable practical information is contained in the two volumes. All the specimens are classed systematically, and a large proportion of them described in such a way that each of the works may be consulted with profit in a great number of medical and surgical cases.

Dr. Jackson's unpublished medical records are voluminous, and if they could be published entire would prove a vast storehouse of important knowledge. Many of his observations have the merit of originality, — some of them, it may be, which were truly his own, belonging equally to others. Among them may be mentioned, as having been considered at the time new and independent observations of Dr. Jackson's, the fact that the decidua was not a "false membrane," but a changed condition of a normal tissue; the partial antagonism or incompatibility between tubercle and cancer; the infrequency of tubercle in alcoholic subjects, to which might be added many small anatomical points which he was always ready to illustrate by his specimens. Those who knew Dr. Jackson's truthfulness would feel sure that he would claim nothing as his own discovery which he did not believe to be so, and those who knew his curious accuracy would be just as certain that such eyes as his must have seen many things which all common observers had overlooked.

As a lecturer Dr. Jackson was exact rather than fluent or copious in expression, but his knowledge was so genuine and so thoroughly his own that it commanded the closest attention and the greatest respect. For the last few years he has not lectured, but confined himself to his duties as curator. Never was there a more enthusiastic devotee to that particular kind of work. He was a picture of cheerful content in the midst of the fragmentary specimens of nature's handiwork by which he was wont to be surrounded. No student in the first flush of his boyish enthusiasm was ever more full of excite-

ment, more radiant with delight, than this man whom the record called old, but whom his unquenchable vitality preserved ever youthful and ever happy in illustrating some fact by a new preparation, or in rendering presentable some dilapidated tenant of his immortalizing receptacles.

In many points he resembled that model of all the finest qualities which belong to the student of science, Dr. Jeffries Wyman. In both the love of knowledge for its own sake was the divine gift which set them apart from the men of mixed motives, who have a conditional liking for truth among many other things. It is truly an inspiration, as much so as that of the poet, which renders students of nature like Wyman and Jackson restless under the stimulus of half knowledge, and keeps them wakeful until they have got at some secret which seems to hide itself from their search. Few, very few of our men of science pass so large a part of their lives in their laboratories. In both there was the same union of modesty of statement with confidence in the accuracy of what they alleged as the result of their own observation. Each knew the other's exactness and trustworthiness. Dr. Jackson often cited the keen observations of Dr. Wyman with the evident feeling that he was referring to a man whose eyes were as sharp as his own, — the highest compliment one observer can pay another. He would not have claimed the discursive range or the inventive ingenuity which so eminently belonged to the Cambridge biologist and comparative anatomist, whose large outlook took a wider field of knowledge for its province. But differing in their special gifts, their noblest qualities were such as belonged equally to both. If such a title were known to the calendar as Saints of Science, both these faithful, sincere, modest, pure-minded students of nature would be numbered among them.

A new generation had grown up since Dr. Jackson had passed the middle term of life. The aspect of his chosen branch of knowledge had greatly changed since he stood forth as its oracle among us. But the whole profession knew what he had done for it; the older members had seen him building up the two museums of which he was the chief architect; the younger knew, in some measure at least, the breadth and depth of his long-continued labors. So when a few years since the proposal was made that he should be invited to sit for his portrait, it met with a response which showed that the profession which he had served so long and well could not wait to bear their testimony to the universal esteem and veneration in which he was held until that term should be reached when praise wastes itself unheard by those upon whom it is lavished. His quiet life will be long remembered in the truly monumental works it has left as his record. But ah, how much else that cannot be forgotten! Many friends remain with us, but there is not one who can fill just that place in our affections which he leaves vacant. Who is there so young in heart while so far along in years? What friend is there whose thorough goodness and truthfulness are rendered so interesting by the individual traits which made him unlike all others? We may thank God that many are left to love and to honor, but one smile, one voice, one companionship, one character, with all its ennobling essentials and all its endearing accidents, we count henceforth only as a memory, and sadness is in all our hearts. O. W. H.

A DEPARTMENT OF PUBLIC HEALTH.

A BILL to establish a department of public health was lately brought before the senate at Washington by Mr. Lamar, of Mississippi, read twice, and referred to the select committee to investigate and report the best means of preventing the introduction and spread of epidemic diseases. We imagine that nothing will be done hastily or without due consideration in so very important a matter; but its very importance, and the not unusual presence in Washington of men who, even in regard to the public health, have their minds set rather upon personal profit than upon the public weal, make it desirable that any step toward establishing a department or board of health should be subjected to careful scrutiny and criticism.

The present bill proposes "that there shall be established at the seat of government of the United States a department of health, the general design and duties of which shall be to acquire and diffuse among the people of the United States useful information on subjects connected with the public health; to direct the establishment and management of efficient sanitary and quarantine systems and regulations; to supervise the marine hospital service; and to organize and direct a corps of sanitary engineers competent to superintend all public works so far as their construction may affect the public health." This preamble is the first of ten sections, in which the department immediately disappears. We are promptly introduced in section two to a director-general of health at a salary of seven thousand five hundred dollars per annum, who figures extensively through the remaining sections, giving the department an opportunity to come to the surface a moment for air at the close of the bill. The director-general's duties and powers are, as might be supposed, sufficiently multifarious and extensive; if he performed the one thoroughly and wielded the others sagaciously he would richly earn his salary, nor would he escape a good deal of active malevolence, and we are afraid but little time would be left him to cherish the union of his official head with its departmental trunk. A man of unquestioned fitness and unusual executive ability might not find such an outlay of time necessary; any other certainly would. In section three the director-general of health swallows up the supervising surgeon-general of the marine hospital service, with his duties and powers, records, papers, and other matters pertaining to that service. It would be of the first importance that there should be the most cordial coöperation between the department of public health and the marine hospital service, but we should suppose that this might be secured without merging the one into the other. The excellent work of preceding years shows that there is ample room for the exercise of first-rate abilities in the marine hospital service alone. Section four contains the pith of the bill, for in it our director general assumes the duty to make and enforce all quarantine and other regulations for preventing the introduction and spread of epidemic diseases. The manner of discharging this very grave duty would of necessity depend much upon the individual views of the director-general with reference to the value of quarantine. Section five imposes upon the already hard-worked officer the duty of preparing suitable tables for the taking of each census, these tables to embody such data as will

furnish a basis for securing a complete system of registration of vital statistics for the United States. Section six requests the director-general to procure information relating to climatic, meteorological, geological, and other conditions affecting the public health, and to furnish the same when wanted; in section seven he is empowered to employ and pay specialists; and section eight allows this omnipresent director-general to make his annual general report accompanied by papers and special reports on particular subjects, to hand in his accurate accounts, and to take a little well-earned repose; while we turn in section nine to our well-nigh forgotten department, with its additional officers which may be required, — for instance, a chief clerk, chemist, engineers, experts, and so forth. We shall doubtless have to revert to this whole question again, as it is one of such vital consequence to the country at large and to every individual.

MEDICAL NOTES.

— The *Gazette des Hôpitaux*, of October 26, 1878, says that Mr. A. Preterre, the surgeon dentist of Paris, known to medical practitioners by his works of dental *prothèse* and his apparatuses for palatine restorations and other buccal operations, obtained at the Universal Exhibition of Paris the sole gold medal awarded to dentists.

— The death of eighty-one physicians from yellow fever is reported by a Southern journal.

— Dr. Klein has shown that the infectious pneumo-gastritis or typhoid fever of the pig, like splenic fever, was due to a bacillus. Having succeeded in cultivating this bacillus so as to raise crops free from all other organisms, Dr. Klein inoculated healthy pigs with a fluid containing the bacilli, and in due time the disease arose and followed its ordinary course. This experiment distinctly proved that two diseases of the higher animals, namely, "splenic fever" and "infectious pneumo-gastritis," are generated by a contagium vivum. Messrs. Downes and Blunt have commenced an inquiry into the influence of light upon bacteria and other fungi. The investigations seemed to show that strong solar light checked and even arrested the development of these organisms.

— In the *Richmond and Louisville Medical Journal* for November is related the story, disgraceful in all its bearings, of the origin of the use of belladonna as a prophylactic against scarlet fever, in the hands of two disciples of Hahne-mann, whose method of introduction revealed cupidity, quackishness, and inhumanity.

— The *Deutsche med. Wochenschrift* relates a case in which Dandridge and Connor examined the pelvis of a man by Simon's method, with a view to obtain accurate information concerning a psoas abscess. They assert that absolutely no force was used, and that they did not go higher than the bifurcation of the aorta. Immediately after the exploration, however, symptoms of peritonitis set in, and the patient died. The autopsy revealed a rupture of the peritonæum, five inches above the anus. The mucous membrane was also torn above the sphincter. This is another case proving that Simon's method — introduction of the whole hand into the rectum — is not entirely harmless.

— Mr. Spencer Wells has been elected honorary member of the Dresden Gesellschaft für Natur-und-Heilkunde "in recognition of his eminent merits in medical science." — Dr. Fordyce Barker has resigned his position as one of the surgeons of the Woman's Hospital of New York. — Professor Grüber, of Vienna, has written a scathing review of Professor Politzer's book on diseases of the ear. See the *Allgemeine Zeitung*, No. 46.

NEW YORK.

— At the recent adjourned annual meeting of the County Medical Society, the committee on hygiene presented through its chairman, Dr. E. G. Janeway, of the board of health, a report which contained much information of interest. From it we learn that if a comparison of different years is instituted on the basis of mortality proportioned to population, the citizens of New York enjoyed better health during 1877 than during any previous year since careful mortuary records have been kept, and that when the reports for 1878 have been completed this year will be found to have proved almost as favorable as its predecessor.

Only two deaths have occurred from small-pox in 1878, and only two individuals have contracted the disease within the city limits during the year. One of these was a barber who shaved a man suffering from the disease who had just arrived in the city; and the other was a man who worked along the docks, and was thus exposed to it. At no period since 1822 has there been as little variola in New York, and the mortality from the disease has been less than thirty in the year only six times since that date. Vaccination is constantly performed by a special corps employed by the board of health for the purpose. There has been some increase over the mortality from croup and diphtheria for 1877, but a marked diminution as contrasted with the other years since 1872. The mortality from typhoid and typhus fever is decreasing, and is less (notwithstanding the increase of population from 515,000, in 1850, to 1,083,000, in 1878) than it was in 1848.

The report goes on to say, "We think that no one can have any hesitation in stating that there has been a marked improvement in the public health. Nor should this be wondered at when we consider that much improvement has been made in the sanitary condition of dwelling-houses, as well as in other matters: soil-pipes having been ventilated, traps placed beneath sinks, etc., privies ventilated so as to remove foul odors from tenement-house yards, sewers reconstructed, etc."

In regard to the summer mortality in 1878, it says: "There were five hundred and twenty less deaths than in 1877, and we feel justified in claiming that comparatively fewer deaths happened in the summer quarter of this year than in any of its immediate predecessors for twenty years, over which our study on this subject has extended.

DEATHS FROM DIARRHOEAL DISEASES.

Third quarter.	1871	1872	1873	1874	1875	1876	1877	1878
	2324	3520	3030	2784	2999	3064	2657	2119

"We know of no other table which has been presented, except, perhaps, that

of variola, which offers so much of interest for the humanitarian and sanitarian. Notwithstanding a marked increase of population (more than one hundred thousand) from 1871 to 1878, we behold in this latter year a less number of deaths from diarrhœal disorders than in 1871 by two hundred and five, and, as contrasted with other years, still more noticeable. . . . This improvement we believe to be due to the efforts made in the summer season by the corps of fifty physicians employed by the board of health to visit tenement houses in search of cases of infantile diarrhœa not under treatment, and to give advice and treatment to such as had no physician, as well as to the efforts in a similar direction (though not on so large a scale) conducted by the Children's Aid Society, and to the excursions for sick children offered by the St. John's Guild, and the visits of the sick children to sanitarium. There can be no doubt to a careful investigator of the value of these remedies, as the study extends not over one year, but over six years."

— This year the ladies of the Flower Charity undertook to decorate all the principal hospitals, not only of the city, but also of Blackwell's Island, for Christmas, and as their friends were very liberal with their contributions of evergreens, autumn leaves, grasses, berries, and ferns the result was a great success.

— December 29th was "Hospital Sunday" in all the Protestant Episcopal churches, when the collections made were devoted to the support of either St. Luke's Hospital or St. Mary's Free Hospital for Children, and in some instances the amount raised was divided equally between the two institutions. In the annual report of St. Luke's, just published, the superintendent mentions, as an instance of the gratitude of patients for the services rendered them, that during the past year he received fifty-nine dollars, which was left by a poor seamstress in Ireland as a thank-offering for the care she received as a patient eighteen years ago.

LETTER FROM ST. LOUIS.

The Regulation of Prostitution. — A New Journal.

MR. EDITOR, — I had intended telling you in this letter something of St. Louis in its purely medical relations, but as there are certain matters of more extended interest under discussion here at present, I shall reserve that information for another occasion. The city fathers have of late been considering the various arguments for and against the advisability of reenacting what is known as the "social evil ordinance." This ordinance, which was in force some years back, and then was repealed, gave the board of health and police department authority for the registration of all prostitutes, provided for their periodical examination by official physicians, and gave the power to isolate in the Female Hospital those found to be diseased. The women were compelled to pay a weekly stipend, which was expended solely for their benefit, and went to the support of their hospital. They were entitled to care in this institution, not only when suffering from venereal disease, but also when sick from other causes.¹ After this scheme had been in successful operation for a length of

¹ This hospital was subsequently converted into a woman's general hospital.

time, the point was raised, especially by the clergy, that this was nothing more than a licensing of prostitution, and therefore an infamous compact with sin and Satan. This class of moralists was reinforced by others, who claimed that the physical explorations were a degradation to the sex generally, and insisted that these examinations should be extended to male offenders against morality as well. These various arguments the legislature conceived to be of sufficient cogency to cause the downfall of the system, and in its stead a mongrel sort of repressive bill was passed. Under this new act the brothels of the city have been constantly raided by the police, the women taken before the justices and fined, or, in lieu of payment, sent to the work-house for a term of weeks. The money thus mulcted from them has been expended without any qualms of conscience upon various lines of public improvements. In the mean time we have had the profound moral satisfaction of having dissolved our iniquitous copartnership with Satan, the sex has not been deprived of any of its inherent privileges, and venereal diseases have been allowed free propagation, affecting the just and unjust alike, without let or hindrance from the law, excepting through the administration of the inefficient and unphilosophical repressive measures mentioned above. Night-walking abounds, and the honest wayfarer may be importuned by Scylla or Charybdis, from door or window, in any part of the city where money may establish a bagnio. I would not give the impression that St. Louis is morally more lax than any other large city, for it is not; but when we compare the old law in its sanitary and police aspects with the present state of things, we seem to be a perfect Sodom or Gomorrah. As remarked before, the law for regulating the evil has been and is now opposed on purely moral grounds, the sanitary side of the question being completely ignored; indeed, one prominent moralist went so far as to say that if we were able by any *legislative enactment* to succeed in exterminating venereal disease, we should be committing the sin of "deposing God's judiciary and police, established by him to check this great evil." There is no thought of mercy to the fallen, or of efforts at restoration to a better life in such utterances. Lecky and Sanger have well shown the futility and danger of attempts at harsh measures of repression, even by "God's judiciary and police." I have neither time nor space to enter into a further consideration of this vital question, except to say that at the recent investigation of this subject before a select committee of the municipal assembly, the reënactment of the same or a similar ordinance was the unanimous desire of those most competent to form an intelligent and conscientious opinion. The police authorities favored the old law, because through its operations vice of this sort could be kept in due bounds. The necessity for registration drove many away, and the fear of its publicity prevented many others from seeking the career at all, and through the facility, obtained in this way only, of reaching this class, scores of young girls were rescued from a life of shame and restored to virtue. The medical profession were emphatic in their approval of the preëxisting *régime* because they had actual demonstration of the assertion that thereby venereal disease was notably decreased. A rigid morality would rightly care little for the consequences to the male offenders against chastity, but as this evil must and will persist, sanitary science looks to the protection of the innocent indirectly involved through its existence.

The medical profession here has been deeply interested by the announcement of a new journal shortly to be issued under the auspices of the Missouri Medical Journal Association, with head-quarters at St. Louis. Long since dissatisfied with our local medical press, the representative men of the city and State have associated themselves together, with an abundant capital, for the purpose of establishing a monthly periodical, which, it is hoped, will be second to none in the country. The enterprise is not a personal one in any sense; no party ends are to be served, and all profits accruing from the publication will go to the further endowment of the magazine. It is but just to say that the general method of your own esteemed journal has been kept in view by the management, as an eminently safe and successful model for its own guidance. It is difficult to convey to you the enthusiasm and earnest work that this project has evoked, and I think I may say without exaggeration that a new era in Western scientific medicine will dawn with the birth of the *Courier*.

H. A. W.

ST. LOUIS, December 24, 1878.

NOEL.

A CHRISTMAS ANACREONTIC.

Bring me turtle here in bowls!
 Bring me turbot, bring me soles!
 Turkey too, and dainty chine,
 Balls of sausage-meat combine;
 Topsy-cake and Roman punch;
 Of plum-pudding a good hunch,
 With mince-pies, both brandy-sauced,
 Bring — the list I can't exhaust —
 Bring them all! and, when you do,
 Bring the nearest doctor too!

From an English journal.

THE METRIC SYSTEM IN MEDICINE.

OLD STYLE.

	METRIC.
mi. or gr. i. equals	Gms. 06
f℥i. or ℥i. equals	4
f℥i. or ℥i. equals	32

The decimal line instead of *points* makes errors impossible.

As .06 (Drug) is less than a grain, while 4. and 32. (Vehicle) are more than the drachm and ounce, there is no danger of giving too large doses of strong drugs.

C. C. used for Gms. causes an error of 5 per cent. [excess].

A teaspoon is 5 Gms.; a tablespoon, 20 Gms.

BOOKS AND PAMPHLETS RECEIVED. — Modern Medical Therapeutics. By George H. Napheys, A. M., M. D., etc. Sixth Edition, enlarged and revised. Philadelphia: D. G. Brinton. 1879.

Conspectus of Organic Materia Medica and Pharmacal Botany. By L. E. Sayre, Ph. G. Philadelphia: D. G. Brinton. 1879.

Differential Diagnosis: A Manual of the Comparative Semiology of the more Important Diseases. By F. de Havilland Hall, M. D., Assistant Physician to the Westminster Hospital, London. American Edition, with extensive Additions. Philadelphia: D. G. Brinton. 1879.

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LECTURES.

CLINICAL LECTURE ON ANIMAL PARASITIC SKIN-DISEASES.

DELIVERED AT THE NEW YORK HOSPITAL.

BY L. DUNCAN BULKLEY, M. D.

Phthiriasis or Pediculosis. — GENTLEMEN: Our first patient to-day, a man in advanced life, affords us a very good example of one of the varieties of phthiriasis, namely, pediculosis corporis, the name which is given to the condition of skin excited by the presence of lice on the body. It may not often fall to your lot to meet with individuals in as low a position of life as this one evidently is, but whether you find it among the highest (as is occasionally the case) or the lowest, the affection in question always presents the same characteristics.

What you see here [the patient being now stripped to the waist] are secondary lesions, that is, they are produced not by the parasite itself, but simply by the scratching to which it has given rise. There is, however, one lesion — and this is a point of great interest — which is attributable directly to the insect itself. The pediculus corporis cannot bite the surface at any point, like the mosquito, but always protrudes its proboscis into an open follicle, and sucks blood from the blood-vessels at its bottom. When it is withdrawn a minute drop of blood follows, and this forms a plug, the end of which can be seen at the orifice of the follicle. This little red spot is too minute to be distinguished at any distance, but this minuteness renders it different from the lesion of any other skin affection whatever. It is to Tillbury Fox that the profession is indebted for the discovery of that clinical point in this affection. Many of us now recognize this minute lesion as pathognomonic of the affection here present, and I have had the opportunity of verifying the truth of the assertions of Dr. Fox in regard to it in dozens of cases. Indeed, were a patient to present himself to me with no other sign of lice whatever about his person except such minute red points as you can see upon the man now before you, if you look carefully for them, I should not hesitate to say that he was the subject of phthiriasis. It is a fact that patients, however humble, when they know that any

examination of their persons is to be made, almost always come to us wearing clean clothes, so that this diagnostic point may not infrequently prove of great service as corroborative evidence where neither the nits nor the insects are to be seen, though the marks of scratching may be present. As a general rule, however, nits can be found about the clothes, and here there is an abundance of them upon the man's shirt. These, you observe, are minute, white, glistening particles, and you ought all to be perfectly familiar with them.

The lesions left by the use of the nails are seen upon this patient, and in the excellent plates and photographs which I now submit to your inspection, to be numerous scratches, scratched papules, and small crusts and cicatrices. You will also notice that in some places a hyperpigmentation of the skin has resulted from the long continuance of the trouble. It is a matter of importance to know just where to look for the evidence of the presence of the pediculus, and to this point I will now direct your attention. Whenever pediculi corporis are suspected, the place *par excellence* to look for them is always upon the shoulders, and the next place is about the waist. This rule holds good even if the patient complains of greater itching in other localities than these. This form of phthiriasis is more apt to be met with in elderly people than in the young.

As to the treatment, it must be directed mainly to the clothing, or else the patient will never get rid of his trouble. The clothes may be either boiled or baked, but should, at all events, be submitted to a temperature as high as that at which water boils, or even higher, in order that all the nits may be thoroughly destroyed. As a local application I know of nothing better than the following, care being taken to have the ingredients well rubbed up together:—

R̄	Acid. carbolic.	3 ij.
	Potassæ causticæ	3 i.
	Aquæ	fl. 3 iv. M.

Such a wash is decidedly unpleasant to the pediculus, and you will find it very effective.

There are, as you know, three varieties of phthiriasis,—pediculosis corporis, pediculosis capitis, and pediculosis pubis. The first of these, as I have already intimated, is met with in dirty people, and most of the lesions are commonly seen about the shoulders and waist, where the clothing binds. Its secondary lesions are, ordinarily, scales, crusts, and excoriations, and sometimes the irritation produced by scratching is so great that a furuncular or pustular condition results, as is shown in these photographs which I hand you. The bite of the insect itself produces only a very trifling lesion, and, moreover, these minute specks which I before described and showed you are comparatively few in number, because at most of the points where the insect has thus pene-

trated the skin there is an irritation which provokes the scratching, and the marks of scratching obliterate or hide the minute blood point.

In making a diagnosis, in addition to these minute red points at the orifices of the follicles, you are to observe upon the body merely the results of scratching. The insects and nits are very seldom, if ever, found upon the body, but must always be looked for about the clothing.

The second variety, *pediculosis capitis*, you will find more commonly upon the back part of the head. The secondary lesions resulting from the presence of the insect there look very much like eczema, but the condition can always be distinguished from ordinary eczema by the fact that large numbers of nits are strung along the hairs like beads. The pediculus itself, too, can usually be very readily seen in the hair, and the glands at the back of the neck are also apt to be considerably swollen, in consequence of the irritation produced. This kind of louse is found not only among the poor and filthy, but sometimes among the highest classes of society. It can, for instance, be carried in a bonnet which at the milliner's may have been tried on by some one whose head was affected with phthiriasis, and I have not infrequently been consulted by patients suffering from this trouble, who had been using all sorts of ointments for months without the real source of the difficulty having been at all suspected. Whenever a case presents itself, therefore, in which there is an eruption upon the back part of the head, accompanied with intense itching, it is always best to examine very carefully for pediculi, or, at least, their nits.

These nits embrace the hair so firmly that they cannot be pulled off, but as they contain the eggs of the insect the only way of curing the patient is by their destruction. A comb, however fine its teeth may be, will not, as it is ordinarily used, remove them, but if the hair is combed "the wrong way, by holding the ends in the hand and combing toward the head, they can readily be detached, because they project in such a way as to be caught by the teeth when the comb is used in this direction. There is one remedy, however, which is absolutely infallible, and that is kerosene oil. It is certainly a very homely one, but it is always accessible, and I am in the habit of using it even in private practice, because it invariably cures the patient, and in the promptest manner possible. Twenty-four hours, I assure you, will be sufficient to make a complete recovery in the worst case you will ever see, if the following plan is carried out. I always tell the patient to go home and saturate the head with kerosene, next to wrap it up for four or five hours, and then soak it with kerosene again, after which it should be left wrapped up until the next morning, when the oil is again very freely applied. After the scalp and hairs have thus soaked in oil for twenty-four hours, the head should then be thoroughly washed, and all the trouble will be over, and the remaining raw places heal very rap-

idly under zinc ointment. The efficacy of the kerosene I believe to be due to a certain amount of naphtha which it contains, and which is fatal to the pediculi and, what is more important, to their nits. I never use a wash of bichloride of mercury for this purpose, on account of the danger involved, one case of death from this cause having already been reported.

The third variety of phthiriasis is pediculosis pubis. It is ordinarily confined to the pubes, but is occasionally met with, as I have myself seen it, about the eyelashes and eyebrows, the axillæ, and in the hairs of the breast. One case is on record in which the beard was affected in addition, but I have never seen such a one.

The pediculus pubis, on account of its peculiar shape, is known as the crab-louse, and it sticks so closely down on the hairs at their very exit from the skin that it is apt to escape detection unless very carefully looked for. It appears there more as a minute crust than as a living insect, and often holds on so firmly to the hair that it is very difficult to detach it, as with the point of a dull pen-knife. A gentleman recently consulted me who had been suffering for three or four years from what was thought to be eczema, but though all sorts of treatment had been resorted to he had never been able to get rid of the difficulty. On making a very careful examination of the pubes, I found hundreds of pediculi there, and even on the hairs on the scrotum, on its under and back surface, and the whole trouble was at once explained, and the relief afforded was prompt and complete. As in the other forms of phthiriasis, the lesions observed in pediculosis pubis are merely the results of scratching, and not due, except secondarily, to the bite of the insect. The nits may also be found, but they are fewer in number than in the head louse, and are located on the hairs quite near the skin.

Kerosene oil is equally efficient also in destroying this kind of louse and its nits, but as the agent is more difficult of application about the pubes than upon the head, I usually prefer to use citrine ointment (of one half strength) in its place, or strong white precipitate ointment. Unguentum hydrargyri, too, is very serviceable, but in employing that we run the risk of salivating the patient. This form of pediculosis is often very obstinate, and in order to effect a cure it might in some cases be necessary to shave off every hair on the part.

SYMMETRICAL GANGRENE OF THE EXTREMITIES.¹

BY J. COLLINS WARREN, M. D.

GENTLEMEN: The following case, which I present to you this evening, may be very briefly described, but is nevertheless of sufficient interest to merit some consideration, as it represents a type of disease

¹ Read before the Boston Society for Medical Observation.

brought about by a disturbance of the vaso-motor nerves, presenting a series of pathological changes which have not been generally recognized, in this country at least, as the component parts of a continuous chain of events :—

The patient, a rather feeble person, and of spare habit, presented herself at the Massachusetts General Hospital on June 27, 1878, with a peculiar condition of the tips of all the fingers and toes. She was a native of Scotland, a weaver, unmarried, and twenty-five years of age. The affection was of a character to arrest the attention at the first glance, and differed from anything hitherto observed by many who saw her. The seat of the disease was confined to the pulps of the fingers and toes, usually extending around the edge of the nail to the opposite side. Another striking feature was the color. The borders of the affected area resembled the semi-transparent purple of a hot-house grape. There was none of the reddish tint seen in intestine at certain stages of strangulation. The lightest shades were always essentially purple in color. As the centre was approached the hue deepened, until it was difficult to determine whether or not the tissue had assumed the characteristic color and condition of gangrene. The patient did not complain of much pain, but had become totally incapacitated for work, owing to the condition of her hands. She had been in good health until four months previously, at which time she suffered from frequent nose-bleed during two weeks. Soon after this she noticed that the tips of the fingers and toes became red. She had had a slight cough, and had been losing flesh, but emaciation was not marked, nor did she consider herself as suffering in any other way than from the condition of her hands and feet. An examination of the chest showed some dullness and râles at the apex of the left lung; the heart sounds were normal. There was no history of syphilis. A more careful examination of the finger tips disclosed the fact that the centres of one or two of these purple patches were gangrenous. This became more marked in a few days, and eventually several dry, black eschars, the largest of which was not larger than a ten-cent piece, came away, leaving a healthy granulating surface. In no case was the bone affected. The treatment consisted of the administration of iron internally, good food, and the application of resin cerate to the parts. On July 16th the record states that all but two of the fingers have had sloughs, and these two look as if they were going to slough. The toes have recovered their normal appearance. Although no complaint of pain was made, the patient always held the hands in an elevated position, as if this gave most relief. On August 15th, when she left the hospital, the granulating surfaces had all healed, and the fingers presented a red and shriveled look. There was no gangrene of the toes. The general condition at the time of discharge was good.

Symmetrical gangrene, as described by Maurice Raynaud,¹ is a variety of dry gangrene characterized by two prominent features, — the absence of any anatomical lesions of the blood-vessels, and the symmetrical development of the disease in the two halves of the body. It may be found in both upper or both lower extremities, or in all four, and occasionally the ears and nose are affected.

The earliest change seen in the diseased part is that termed "local syncope," a condition, however, perfectly compatible with health. The patient, generally a woman, perceives a pallor and coldness of one or more fingers. This change, known as "dead fingers," may last a few minutes or several hours. The exciting cause appears to be an exposure to cold, although but a slight lowering of the temperature is sufficient to produce it. It appears, however, sometimes to be emotional in character. The skin is apparently deprived of its blood, and its tem-

¹ Nouveau Dictionnaire de Médecine et de Chirurgie, vol. xv., page 636.

perature is below normal. The reaction which follows is frequently quite painful. A more advanced condition is known as "local asphyxia;" the pallor is followed by a cyanotic color of varying degrees of intensity. On pressure the color disappears, and returns very slowly, showing great feebleness in the circulation. The pain is now almost continuous, and in some cases may be compared to that accompanying onychia, particularly when reaction sets in. This condition resembles that seen in cyanosis, but in the latter affection we find organic disease, and there is no pain and no reaction. The clubbed finger nails of cyanosis, erroneously attributed by some authors to phthisis alone, is never seen in local asphyxia.

In the outset the disease is sometimes mistaken for chilblains, but the deepening color and pain soon set all doubt at rest. The fingers may become almost black, and minute blisters appear, particularly on the little finger, later on others, and situated generally at the extremity. The blister becomes filled with a sero-purulent fluid, breaks, and leaves an excoriation which may remain several days. The color begins now to return, the excoriation heals, and a little conical tubercle is left just beneath the edge of the nail. The improvement is, however, only temporary; the same changes recur, and may be repeated during a period lasting one or two years. In an advanced stage the ends of the fingers are covered with a number of little white scars, the skin is indurated, and they have a thin, sharp, withered look, as if they had been pinched in a vise, and had preserved the shape thus given to them.

If gangrene sets in at once there are no vesicles. A third or one half of the unguis phalanx may come away.

During the height of the disease the growth of the nail stops temporarily, and the interval is subsequently indicated by a grooved depression in the nail. The disease has not been known to terminate in gangrene when situated in the nose and ears. Cases cited below show this statement to be incorrect. Beyond the severe pain, upon which Raynaud dwells as a very striking symptom, we find little else to notice in the condition of the patient. No cardiac disease is found; possibly a slight souffle may be heard, but not of sufficient strength to indicate valvular lesions.

In well-marked cases the disease occupies a period varying from a few days to a month in developing; it remains at its height for about ten days, and convalescence may be fully established at the end of from three weeks to several months. In no case does death seem to have been caused directly by the disease. Occasionally, after one or two attacks, the condition becomes a more or less permanent one, and the part affected is continually cold and torpid. At times the skin of the back of the hands and fingers becomes thickened and rigid, and is not movable

on the subjacent parts. The fingers are held semiflexed and ankylosed. The two affections most likely to be mistaken for this disease are chilblains and senile gangrene. In the former we are not likely to find all extremities affected at an unusual time of the year. Senile gangrene is rarely bilateral; it extends much further; the characteristic condition of the arteries is usually present. It is easily distinguished from cyanosis depending on cardiac disease. Owing to the predominance of pain it has sometimes been mistaken for gout. The prognosis is favorable. If the stage of gangrene develops itself at the end of a week or ten days, it is probable that a complete recovery will follow the separation of the eschars. If, however, the disease does not reach this point, but comes and goes, there is danger that it will settle down into a chronic condition.

In four fifths of the cases the disease is found in women. In the great majority of cases it occurs between the ages of eighteen and thirty years.

As a low temperature is an exciting cause, we find it most frequently on the approach of the winter months. Not infrequently there may be premonitory symptoms for one or two winters, with return to health in the summer season, and a final termination in gangrene. In one case the disease was found to coexist with diabetes mellitus. Ordinarily we observe no special predisposing cause in the general condition of the patient. How are we to explain these peculiar changes in the vascular system?

It is well known that the quantity of blood in circulation in a given spot increases when the capillary walls are relaxed; that it is diminished, on the other hand, when the walls are contracted; and, when the cavity of the vessel is obliterated, the blood disappears from the part.

This *algidity* may terminate in reaction, — relaxation of the muscular fibres of the vessels, — or it may continue until gangrene takes place.

Symmetrical gangrene begins with a spasm of the capillaries, which may go back as far as arteries of considerable size (radial pulse).

In the simplest cases of spasm we have the "*dead finger*," a passing condition in which the circulation is reëstablished after a more or less painful period of reaction. This is "*local syncope*." The veins probably are contracted also. The phrase "*local asphyxia*" is used to denote a more advanced condition. The reaction which follows spasm is here incomplete. The veins having the smallest amount of muscular fibres relax first, and the venous blood flows back into the capillaries, but stops here, as the arteries are still contracted. It will be noticed that this change does not bring about that deep color which we find in an extremity which has been violently constricted. In the latter case the venous blood is forced back into the arterial system. As in local asphyxia, the reflux stops at the capillaries. There is more transpar-

ency in the color, a mixture of cyanosis and pallor, as it were. There is, of course, as the result of this condition, a certain amount of stagnation in the larger veins, and sometimes slight œdema.

On one occasion the author had actual proof of this arterial spasm in a case where temporary disturbance of vision occurred during the attacks; the ophthalmoscope showed a well-marked contraction of the central artery of the retina.

If the condition becomes a permanent one gangrene occurs. Other portions of the body are affected, of course, with this muscular spasm of the arteries, but it is only in the extremities which present a large surface in proportion to their calibre, and consequently readily lose heat, that the conditions are favorable for the death of the part.

How shall we explain the symmetrical character of the lesions? A consideration of the mode of origin, distribution, and action of the vaso-motor nerves may serve to throw light upon this point.

We now no longer look upon the sympathetic as an independent nerve having no communication with the cord. We find filaments of this nerve emerging from the cord in the anterior branches. The same phenomena of congestion which Bernard obtained by division of the sympathetic above the superior cervical ganglion can be obtained by certain sections in different portions of the cord. Experiments have shown that there exists a series of genuine vaso-motor centres ranged up and down the spinal axis. The actual origin of the vaso-motor nerves of given portions of the body has been determined with tolerable accuracy. Starting from this point the fibres in question follow those of the grand sympathetic, or, as in some cases, the cerebro-spinal trunks.

An experiment by Brown-Séquard throws light upon the special action of this nerve which is brought into play in the present disease. A section of one half of the spinal cord near the medulla is followed by a paralysis of the blood-vessels on the same side, and a permanent spasmodic contraction of them on the opposite side. There are also corresponding changes of temperature. It is clear that the vaso-motors on the divided side, having lost connection with their point of origin, are paralyzed, and a passive congestion takes place in the corresponding part, while the lesion of the cord, being a source of irritation to the adjacent vaso-motors of the opposite side, produces a spasmodic contraction of the vessels on that side. It is known that an intimate communication exists between the fibres of this set of nerves as well as in the fibres of nerves of voluntary motion.

Let us suppose now that an irritation is created in the central portions of the cord; it is easy to conceive how it would reach the vaso-motor fibres symmetrically disposed on each side of the spinal axis. If this excitation becomes permanent, if it go to the point of tetanization,

the phenomena of algidity occur ; one step further and the symmetrical gangrene is produced.

In order to understand how this algidity may be confined to one set of vessels, — for instance, those of the upper or lower limbs, — it is only necessary to suppose a central irritation occurring at a single point in the cord from which the vaso-motors of the particular region affected happen to emerge. This may be limited to a single finger of each side. It now remains to determine the way in which this irritation is supposed to act. The vaso-motor nerves are affected not only by direct irritation, as in the experiment alluded to, but may be also susceptible to reflex action. An example of this is the contraction of the vessels of one hand when the other is suddenly plunged into very cold water. A similar action is the sudden pallor produced in the face by severe pain inflicted upon some distant point. In the disease we are now considering it is probable that a similar chain of events takes place.

Inasmuch as this disease appears after confinements, or may show itself periodically at the menstrual epoch, it is but reasonable to suppose that the reflex irritation may take its origin in the uterus. In a later article¹ on the subject, Raynaud defines this disease as “a neurosis characterized by an exaggeration of the excito-motor power of the cord presiding over the vaso-motor nerves,” and he advises the application of “constant descending currents” to the spine. The excito-motor power of the cord is thus weakened, and the reflex contractions of the vessels are in consequence diminished.

A consideration of the reflex origin of this vaso-motor disturbance would suggest occasional phenomena, such, for instance, as are observed in traumatic inflammations, supposed to be due to reflex actions brought about by irritation of the cerebro-spinal nerves, and, in fact, we find this to be the case. Vulpian² has described, in connection with the above disease, a symmetrical congestion of the extremities which he considers as similar to the congestion of the skin seen in certain cases of neuralgia. It is possible, he thinks, that a sort of symmetrical neurosis of the peripheral nerves of the extremities occurs, causing by reflex action dilatation of the vessels of the parts. In using the term vaso-motor neurosis we must accept it in this sense only. The seat of the pain is in the sensitive nerves or in the tissue occupied by them, and the dilatation of the vessels secondary. Based on this mode of action is the theory of one observer³ that neuralgia of the ileo-lumbar nerve brings on congestion of the uterus and its appendages, and that metrorrhagia and leucorrhœa may be thus produced.

This view is certainly plausible, and the supposition had already oc-

¹ Archives générales de Médecine, 1874, page 5.

² Leçons sur l'Appareil vaso-moteur. Vulpian. Paris. 1875.

³ Cahier des Nevroses vaso-motrices (Archives générales de Médecine, 1863).

curred to me whether certain fleeting and capricious uterine pains, brought on frequently by emotional perturbations solely, might not be explained by a vaso-motor disturbance of the uterine vessels. The changes seen in the tongue in Dr. Mills's case, presently to be mentioned, are suggestive of such possibilities.

Billroth¹ had seen but one case:—

"A young, very anæmic man, without apparent cause, had first gangrene of the tip of the nose, then of both feet. After suffering for months he died; as on the patient, so on the cadaver, I could find nothing morbid beyond the excessive, inexplicable anæmia." Recently Dr. Medopil² reported a case under Billroth's care. The patient was a female, nineteen years of age. She was first seen by Dr. Billroth in September of the year previous. She then noticed that the fingers became dead and pale after washing in cold water. The tip of the index finger of the right hand soon became very painful, remained hard for a time, and finally mortified. The gangrene terminated in necrosis of the ungual phalanx. The middle finger of the same hand was next attacked with inflammation resembling paronychia, which did not extend beyond the radial half of the bed of the nail, and terminated in the exfoliation of small, dry, parchment-like crusts. A year later the index and middle fingers of the left hand were similarly affected, at this time all the fingers of each hand being cold and pale.

Dr. Charles K. Mills³ reports a case of "vaso-motor and trophic affection of the fingers," which evidently belongs to the chronic and recurrent form of "local asphyxia," and which he believes to be unique:—

The patient first noticed the symptoms of local syncope at the age of nineteen. The little finger suddenly became cold, white, and numb. Later, one or more fingers would on exposure to cold present a frost-bitten appearance. "The disorder persisted, growing gradually worse, until the ends of all her fingers and both thumbs were more or less involved." Six months later a small swelling formed at the point of the right thumb, which felt as if a splinter had run into it; a small abscess resulted. "Similar abscesses appeared from time to time in all her fingers and the other thumb." These recurred at intervals of two or three months. The first attack in each case caused great pain. When the patient came under Dr. Mills's care, in June, 1878, nearly four years after the first symptoms, there was a decided blueness of the finger tips. Once after dancing the tip of her tongue became bluish-white, and felt as if it had been burned with hot tea or coffee. Her troubles were always exaggerated by emotional disturbances. There was a presystolic murmur and signs of a cavity at the right apex. A careful series of thermometrical observations showed the temperature of the fingers to be considerably below the normal.

The author gives a large number of interesting minute observations, but I think I have made selections sufficient in number to show the identity of the affection with the one we are now considering.

Under the head of Chronic Vaso-Motor Hyper-Irritation, Dr. A. M. Hamilton⁴ describes an affection due to a "temporary spasm of the muscular coats of the small vessels of some limited spot, the site being usually a part of the hand." "The peculiarity is the limited blanching and coldness coming on without assignable cause, and finally subsiding,

¹ Wiener medizinische Wochenschrift, No. 23, 1878.

² Surgical Pathology, page 302, first American edition.

³ American Journal of the Medical Sciences, October, 1878.

⁴ New York Medical Journal, 1874.

to reappear perhaps after an uncertain interval," the fingers being chiefly affected, — "evidently our local syncope."

Dr. S. Weir Mitchell¹ gives a collection of cases illustrating a form of vaso-motor neurosis of the extremities, to which he gives the name erythromelalgia (*eruthros*, red; *melos*, a member; *algos*, pain).

The first series of three cases is described quite at length, and would probably be classified by Vulpian with those cases described by him as symmetrical congestion; indeed, one of Vulpian's cases is quoted. The patients were males, and the affection chiefly confined to the feet. The earliest symptom was a burning pain in the soles, especially on standing, and also a flushing of the part. The flushing is thus described: "In the graver examples the area of greatest pain in the soles or hands is distinctly and permanently marked by a dull, dusky, mottled redness, as if the smaller vessels were always over-distended." In the erect position "the foot gets redder and redder, the veins stand out in a few moments as if a ligature had been tied round the limb, and the arteries throb violently for a time, until at length the extremities become of a dark-purplish tint." Treatment was not attended with very satisfactory results. Dr. Mitchell is inclined to consider these and other cases which I shall presently allude to as an unrecognized type of spinal or cerebral disorder, possibly associated with distinct lesions of definite regions. His fourth case is a fair example of the disease we are considering. The patient was a merchant, twenty-nine years of age. The symptoms, briefly, burning pain in the cushions of fingers of left hand, later of right hand; finger ends darkly congested; at times similar pain in the feet; had had syphilis; no benefit from treatment. His sixth case is a still more striking instance: —

The patient was a woman, a Mexican, and was treated by Dr. Stillé, of Guerrero. She was twenty-nine years old; no organic disease; burning of tips of fingers of both hands on palmar aspect; fingers clubbed, nails thickened. "It seems as if the muscular and fatty portions had shrunk, and also as if the last phalanges had been absorbed."

The next case was that of a baker, twenty-two years of age. The symptoms were similar, but we noticed that he had in addition rare pustules on the hands, the agony caused by which seemed to be intense.

A case quoted from Sir James Paget is evidently one of local asphyxia, brought on apparently by excessive use of cold baths.

It is quite evident that many of Dr. Mitchell's cases belong to the group of "local asphyxias," and that some are, on the other hand, "symmetrical congestions."

Dr. T. A. McBride reported last spring to the New York Neurological Society a case of *digiti mortui*, and is the only American writer whom I have consulted who distinctly recognizes the relation of this affection to local asphyxia and symmetrical gangrene.

¹ American Journal of the Medical Sciences, July, 1878.

Fischer¹ reports two cases, one following intermittent fever. The cheeks, ears, and nose were the parts affected. The patient was a man forty-two years old. A second case followed an attack of typhus fever. The writer gives several theories as to the origin of the disease, but inclines to that of Raynaud. A case, reported by Christian, of gangrene of both feet, following malarial fever, deserves to be mentioned in connection with these cases.

Drs. Stewart and Holton² report a case of symmetrical gangrene caused by chronic endarteritis, the name being obtained from Ziemssen's *Cyclopædia*, Vol. VI., page 383, evidently not due to local asphyxia.

Dr. Bernard Henry describes a case of idiopathic gangrene of the four extremities, which, if not a specimen of the symmetrical disease of Raynaud, certainly merits mention here : —

The patient was a widow, forty-two years of age. She had led a very dissipated life, and had been treated for syphilis; had given birth to nine children, besides having had frequent abortions intentionally produced. She first noticed after washing a stinging sensation in the hands and feet. They were rendered more painful by scratching, and soon assumed a dusky red color. When first seen the disease was thought to be purpura. In the course of two weeks the affected parts turned black and mortified. These were the hands and forearms for about a third of their length, and the lower third of the legs and feet. The tip of the nose and the skin over both patellæ and the cartilages of the ears were of dark hue, and finally sloughed. There was great aversion to warm coverings. The gangrenous portions became mummified. The parts separated, and some were removed, but the patient died at the end of about two months. At the autopsy it was thought that there was some tendency to fatty degeneration of the heart, and apparently mitral stenosis; there was commencing cirrhosis.

A case very similar to this is reported by Dr. Thomas Camp³ under the title, A Case of Supposed Ergotism. Both legs, all the fingers, the ala of the right nostril, and the upper part of the helix of each ear were the parts affected. There was a peculiar eruption coming and going on different parts of the body. The patient eventually recovered. Ergotism was suspected in both of these cases, but there was no direct proof.

The following references are obtained through the kindness of Dr. J. S. Billings from the Index of the National Medical Library at Washington : —

Fischer. Arch. f. klin. Chir., Berlin, 1873, xviii., page 335. *Schonbar.* Hospitals Tidende Kjøbenhavn, 1869, iii., page 17. *Favre.* Gaz. des Hôp., Paris, 1874, xlvii., page 347. *Bull. Norsk. mag. f. Lægevidensk.* Christiania, 1873, iii., page 695. *Le Fort.* Bull. Soc. Chir., Paris, 1872, third series, i., page 178. *Padieu.* Bull. des Tran. Soc. Med., Amiens, 1868, vii., page 66. *Jaccoud.* Jour. de Med. et de Chir. prat., Paris, 1875, xlvi., page 198. *Gelabert.* Indep. Med., Barcelona, 1872-3, iv., page 283.

Under Gangrene affecting both Extremities, not called Symmetrical, see *Christian.* Va. Med. Monthly, 1876, ii., page 199. *Bishop.* Clinic, Cincinnati, 1873, iv., page 25. *Henry.* Med. Examiner, Philadelphia, 1856, xii., page 129. *Rademaker.* Louisville Med. News, 1876, i., page 183.

¹ Medical Record, May 11, 1878.

² Chicago Medical Journal and Examiner, December, 1878.

³ British and Foreign Medico-Chirurgical Review, July, 1855.

RECENT PROGRESS IN OBSTETRICS.

BY W. L. RICHARDSON, M. D.

The Aetiology of Face Presentations. — Dr. Mayr gives¹ some interesting facts relating to face presentations. Out of 14,519 deliveries 0.73 per cent. were of the face, and 0.103 per cent. were of the brow. The relative number of first positions of the face to the second was as 1.4 to 1. The mean duration of the first stage of labor in primiparæ was 23.6 hours; in multiparæ 14.5 hours. The mean duration of the second stage was in primiparæ 12.5 hours, in multiparæ 1.26 hours. Rupture of the perineum occurred in only seven cases out of one hundred and seven face presentations which were under his observation in the Munich Lying-In Hospital, but it happened in none of those in which the forceps had been used. Of the one hundred and seven mothers eleven suffered subsequently from some puerperal disease. Four patients who were delivered with forceps had later an attack of puerperal peritonitis, and three died; the result in the fourth case was unknown, the patient being removed from the hospital while dangerously ill. The general mortality in the Munich Hospital was 1.7 per cent., while that of face presentations was 2.8 per cent. As regards the children, fifty-two were male, and fifty-five were female. Of these 6.54 per cent. died during or shortly after delivery.

As regards the aetiology of face presentations Dr. Mayr was convinced that the greater the weight of a child in proportion to its length the more readily a face presentation is produced. There is also an excessive prolongation of the occiput and an increased maximum transverse diameter. Part of this may be produced during the delivery, but not all of it. The unusual length of the antero-posterior diameter, when compared with the maximum diagonal diameter, is a well-known characteristic of heads in cases of face presentation. Owing to this excessive projection of the occiput the leverage of resistance applied to the occiput is increased, and the heads so delivered had an increased biparietal diameter. The head is then grasped tightly at the brim in the biparietal diameter; its axis of motion, as regards the pelvis, will be therefore at this point, which is further back than usual, and the expulsive contractions of the uterus will cause the extension of the head, which produces the face presentation.

Treatment of Cracked Nipples. — Dr. Haussmann reports² two cases in which he had treated cracked nipples with a solution of carbolic acid. Every two or three hours dressings soaked in a two per cent. solution of the acid were applied to the nipples. At first a solution of the strength of five per cent. was used, but it was found that the

¹ Archiv für Gynäkologie, xii. 2.

² Berliner klinische Wochenschrift, 14, 1878.

weaker solution was equally effective. The result of this method of treatment was an almost immediate relief from the pain. After each application of the dressings the patients complained of a slight sense of smarting throughout the breast. Care was taken to wash the nipples thoroughly before putting the baby to the breast. In the cases reported by Dr. Haussmann the mothers were able to nurse the children within a few hours after the application of the acid, and the nipples were entirely healed within two days.

The Treatment of Placenta Prævia.—In a paper recently read before the Medical Society of the District of Columbia, Dr. J. T. Johnson calls attention to the high rate of mortality observed in cases of placenta prævia, as regards both the mother and child. The frequent recurrence of hæmorrhages so exhausts the mother that when the time of actual labor arrives she is in no condition whatever to bear the hæmorrhage which usually accompanies the dilatation of the os. The child, too, for the same reason, is very frequently sacrificed, even when the mother's life is saved. He strongly dissents from the treatment generally adopted in such cases, and advises that in all cases where the existence of a placenta prævia has been clearly diagnosticated, premature labor should be induced before the occurrence of exhausting hæmorrhages. In cases where labor has already begun, he favors the immediate introduction of a catheter, and the withdrawal of the liquor amnii. The uterus is thus at once provoked to greater activity, and, moreover, can act to a better advantage. The head, if that be the presenting part, is driven down, and, as the cervix dilates, the pressure of the head controls the hæmorrhage. The introduction of a sponge or laminaria tent, followed later by the use of Barnes's dilators, hastens the dilatation. In this way version may be avoided. Where version must be performed Dr. Johnson advises that bimanual version be tried, rather than that the hand should be forcibly carried within the uterine cavity through the imperfectly dilated os. In conclusion, he states that he is firmly convinced that in proper cases, and when seen in time, the induction of premature labor will save many lives, both foetal and maternal; and also, that when the above-mentioned gentle means of dilating and at the same time plugging the cervix are universally adopted, the fearful mortality in these cases will be greatly reduced.

Use of Disinfecting Injections into the Uterus after Delivery.—In our last report of progress we gave a *résumé* of several recent writings, all of which favored the use of disinfecting injections during the puerperal state. Since then two communications have appeared,¹ written by Küstner and Fritsch respectively. In both of these the attention of the profession is called to the danger which is liable to follow a too free use of disinfectants in washing out the cavity of the uterus after deliv-

¹ Centralblatt für Gynäkologie, xiv. 16.

ery. In the cases observed by these writers the symptoms were unmistakably those of acute poisoning. Dr. Küstner's case proved fatal, and at the autopsy it appeared that the uterus itself had not in any way been injured by the introduction of the syringe. Yet there had been suddenly developed unconsciousness, contraction of the pupils of the eyes, rapid respiration, dyspnea, and a weak and scarcely perceptible pulse. The muscles of the face were convulsed, the head was thrown backwards, the jaws were fixed, and a cold sweat covered the patient. In from ten to fifteen minutes the patient improved considerably. Half an hour later the patient vomited a black vomitus, and the urine drawn by a catheter was black. The disinfecting solution used in this case was one part of carbolic acid to twenty of water.

Dr. Fritsch reports three cases in which most dangerous symptoms arose. In one of these cases the disinfectant used was salicylic acid, and in two carbolic acid. In all of them there was a sudden collapse, followed by unconsciousness and a very rapid pulse. In the two cases in which carbolic acid had been used there was observed the same discoloration of the urine. These three cases recovered. In all of them the uterus was imperfectly contracted.

Both observers regarded these symptoms as due to the very rapid poisoning of the patient by the entrance of the disinfecting agent into the circulation through the patulous sinuses of the imperfectly contracted uterus. They still strongly favor the use of a disinfecting irrigation of the puerperal uterus in all cases in which the attendant has reason to suspect any putrid absorption, but they both recommend that, in all such cases, the injection should be performed with the greatest care, and that especially the introduction of a forcible stream should always be carefully avoided.



PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

A. M. SUMNER, M. D., SECRETARY.

APRIL 1, 1878. *Syphilis*. — DR. G. H. M. ROWE read a paper on Mental Derangement from Syphilis, which was reserved for publication.

DR. NORTON FOLSOM doubted if in many so-called cases of cerebral syphilis there is any other relation or connection between the cerebral manifestations and the syphilitic poison than that which exists in other debilitating or degenerative diseases. We see in asylum patients suffering from insanity who have subsequently contracted syphilis without producing any change in the course of their mental symptoms. He objected to the term "cerebral syphilis," and thought it better to use the expression "insanity complicating syphilis."

DR. ELLIS thought that to show that syphilis is a potent cause of mental disorder, such as the reader has described, it would be necessary to prove that insanity is more common in those suffering from syphilis than in those not so affected; he doubted if this point had yet been established.

DR. C. F. FOLSOM remarked that he thought it impossible to determine definitely whether syphilis causes mental disease or not until we intimately know what that condition of the cells of the brain is that produces insanity. Gummata or other tumors, local inflammations, thickening of the membranes, otitis and periostitis, for instance, are all sometimes attended with cerebral derangement, and often not; why, however, we do not know, but we may reasonably conclude that the by no means infrequent cases of mental derangement which are not attended with much debility or general symptoms of ill health, and which recover rapidly under a judicious antisyphilitic treatment, are of syphilitic origin, or dependent on the pathological condition produced by that disease.

DR. ROWE referred to various articles written by Wille, Skae, Cluster, and Stewart, which seem to show that there are special symptoms indicative of mental derangement depending upon syphilis, and said that he noticed a remarkable similarity in the symptoms noted in his cases and in those reported in the above-mentioned authorities. Dr. Rowe added that there was a wide discrepancy in the conclusions derived from English and German observations regarding the frequency of cerebral derangement in syphilitic disease. One English writer asserts that one in forty of all cases of insanity is of syphilitic origin, while a German investigator in the insane asylums of Germany reports only one case out of nine hundred.

DR. BOWDITCH thought that we could never determine the relative frequency of the complication until each insane asylum had a pathologist connected with it. He asked Dr. Rowe how many were thus provided at the present time.

DR. ROWE replied that the number of insane asylums in the United States which have pathologists connected with them does not exceed six out of eighty; but the time was not far distant when the majority of enterprising asylums would have such an officer for the investigation of mental diseases.

Brain Tumor. — DR. C. E. STEDMAN showed a tumor, probably glioma, situated in the middle of the left hemisphere of the brain, and gave the following history of the case: The patient, a man forty-six years of age, was seized early in last December with a convulsive attack, losing consciousness and biting his tongue. This lasted nearly an hour, and recurred often during the following months. When first seen by Dr. Stedman, six weeks after the symptoms manifested themselves, his mind was clear, there was partial loss of sensation and motion of the right cheek, the orbicularis was unimpaired, and the tongue was protruded somewhat toward the right. There was partial aphasia and slight loss of the sense of taste. Large doses of bromide of potassium stopped the attacks, but his general health began to fail, the aphasia became complete, loss of motion on the right side followed, and he died three months after his first convulsive attack.

New Instrument. — DR. BAKER showed an instrument designed by himself

for measuring the vagina for the purpose of a proper application of pessaries. He also showed a flexible uterine sound made from delicate springs covered by india rubber, the external end of the instrument giving the reverse position of the uterine flexion.

Syphilis. — DR. J. B. AYER reported a case of necrosis of the frontal bone in tertiary syphilis. The patient, thirty-five years of age, contracted syphilis from her husband. The first history of the case was in November, 1871, when she suffered from ulcerated sore throat and cephalalgia. In a fortnight the uvula was destroyed, in spite of free applications of nitric acid. Under mercury and chlorate of potash gargle she did well until October, 1872, when abscesses formed on the outer side of the thigh. These continued to discharge and heal for over a year. In October, 1873, the cephalalgia returned. She became cross and irritable, and lost flesh rapidly. In April, 1874, coryza was well marked, and in November of the same year pieces of the turbinated bone came away. The patient had been taking iodide of potassium, but now mercury was added. This she continued to take for five months. In January, 1875, a slight swelling like a pimple appeared on the forehead over the left eyebrow. This broke a few weeks later, showing necrosed bone beneath. The opening gradually increased in size, and a little over a year ago a similar swelling appeared over the right eye, which opened and gradually enlarged. Carbolic ointment was ordered, but she became discouraged, and only used the ointment until last September, when she was persuaded to begin treatment again. Iodide of potassium was ordered, and the dose gradually increased, until she was taking twenty-three grains three times a day. She also used a nitric acid wash.

January 21st. The necrosed bone being movable, the patient was etherized at the Massachusetts General Hospital, and it was removed. Both tables of the skull were necrosed. The patient came out-of-doors in eight weeks, and is now attending to her duties in her shop. The wounds are slowly closing in around the edges. She has had a slight attack of erysipelas lasting two days, and an occasional headache, which yields to bromide of potash in a few moments. She has gained ten pounds during the past two months, and is greatly improved in every respect. The patient is now taking biniodide of mercury and iodide of potassium in a solution of gentian and cinchonia.

Tumor of Uterus. — DR. BUCKINGHAM showed a body weighing two or three ounces, which had been examined by Dr. Fitz and pronounced fibroid tumor of the uterus. It came from a woman of fifty-two, who had been under treatment since the middle of January, at which time she was seen by Dr. Chadwick with him. The uterus was distended so as to be impacted in the pelvis, and to cause great annoyance by pressure on the urethra. She was given twenty drops of the fluid extract of ergot three times a day, which caused no great annoyance for three days, when the pain became severe and pretty constant, so that although the ergot was stopped she was unable to sleep without an opiate. The pain disappeared in the course of ten days, and towards the end of February the ergot was resumed in ten-drop doses, gradually increased to fifteen, when shreds began to come away, and two weeks later the present mass was expelled after three hours' pain, since which she has rapidly gained.

APRIL 21, 1878. *Officinal and Unofficinal Preparations of Medicine.* — DR. ROBERT AMORY read a paper on Certain Facts in Regard to Officinal and Unofficinal Preparations of Medicine, as follows: —

I visited four of our principal pharmacutists in Boston, — one in the central portion of the city, one at the West End, one at the South End, and one in Roxbury. I endeavored to select those pharmacists who were most ambitious in the professional standing of pharmacy. After an examination of their prescription books, covering the prescriptions for one month which they had actually dispensed, I subdivided these into the following six classes: (1.) Those which contained unofficinal preparations; in other words, those whose formula is known, but which are not recognized by the United States Pharmacopœia. (2.) Those which contained certain proprietary medicines, or, in other words, trade-mark preparations, such as Horsford's acid phosphate, etc. (3.) Those prescriptions which called for proprietary medicine alone. (4.) Those composed of private prescriptions, known, for instance, only to the prescriber and to the dispensing pharmacist, but not published. (5.) Those containing only United States Pharmacopœia preparations. (6.) Preparations according to any other national Pharmacopœia.

By reference to the accompanying statistics of two thousand six hundred and seven prescriptions, we find that less than one fifth are unofficinal, and less than three fourths (sixty-five per cent.) are officinal, whereas seven per cent. are proprietary or patent medicinal preparations. A careful examination of this table will show that our Pharmacopœia in seven years and a half after its conception covers only sixty-five per cent. of the physicians' prescriptions dispensed by our best druggists. This indicates one of two things, — that our physicians are unfamiliar with the Pharmacopœia, or that the latter does not answer the requirements of the medical profession.

	Number.	Per cent.
Class I. (unofficinal)	587	23
Class II. (proprietary mixed)	101	4
Class III. (proprietary only)	87	3
Class IV. (private)	24	1
Class V. (officinal)	1720	65
Class VI. (other Pharmacopœias)	88	3
Total	2607	100

Diphtheria and Erysipelas. — DR. F. C. SHATTUCK read a paper on An Outbreak of Diphtheria and Erysipelas in a Small Hospital, which was published in the JOURNAL July 18, 1878.

DR. AMORY considered the question of diphtheria an open one. In his limited experience, during the past winter, of four cases, — three in one house and one in another, — the fact that these children, for weeks prior to the diph-

theria, never left the premises of their residence led him to think that the disease was idiopathic, and not imported. In the house where the three cases occurred, the odors from a privy vault could be perceived. In the other case there was no malarial cause that could be found, the child not living in a room adjacent to any drainage, nor was any other member of a large family in the same house sick with the same disease. Of course, communication between the sick child and most of the family was prohibited and faithfully prevented.

DR. BOWDITCH said that he felt the deepest interest in this paper, and asked why a patient should be admitted into a hospital with a patch in the throat.

DR. SHATTUCK responded that it subsequently proved to be a mistake. He had seen many cases of follicular sore throat which proved not to be diphtheria.

DR. BOWDITCH asked what examinations were made of the drains in this case, and how such an examination could be made. He also wanted to know if there was any examination of the soil under the house.

DR. SHATTUCK stated that there was no examination made under the house. He considered the peppermint test a good one. He had asked Dr. Folsom if he would come and examine the house drains; but he said it was of no use if the inspector went over the house, which he did, and found the drains in perfect order.

DR. BOWDITCH called the society's attention to the condition of the soil found under Marlborough House, the residence of the Prince of Wales. He asked Dr. Shattuck if it would not have been well to have disinfected the wards thoroughly.

DR. SHATTUCK replied that there were pans containing a solution of carbolic acid kept in the wards.

DR. BOWDITCH remarked on the local epidemic of diphtheria which occurred at Vergennes, Vt., where for the space of one and a half square miles almost every child had at least sore throat. Sometimes there was no membrane. No child from a house where there is diphtheria should be introduced into another house where there are children. He asked Dr. Shattuck if erysipelas and diphtheria ran together.

DR. SHATTUCK stated that he could find no statements about this in any authority which he had consulted, but found that erysipelas and diphtheria were classed as filth diseases by some sanitarians.

DR. BOWDITCH wished to know if the same cause produced them.

DR. SHATTUCK replied that in this case the affections seemed to depend on the same or allied causes.

DR. BOWDITCH cited the case where the poison was supposed to have been carried in the clothing of a father from the funeral of a case of diphtheria to his own family.

DR. E. G. CUTLER spoke of a case which occurred under his charge at the Carney Hospital, where a woman having had diphtheria came into the hospital because she could not be taken care of outside, and was convalescent in a short time. In about three weeks a child who had never come in contact with this woman or the nurse who attended her, but who was allowed to play out

of the hospital, was taken with diphtheria, and for two or three days before it was isolated was in the general ward with several patients suffering from phthisis and other debilitating diseases, but none of them had a single symptom of the disease. Both the woman and child recovered, and both had paralysis of the soft palate. The drains and traps in the establishment were examined and found in perfect order.

DR. KNIGHT asked if the period of incubation in the second case of erysipelas in Dr. Shattuck's paper was not too short for communication from the first case.

DR. SHATTUCK replied that perhaps it was too short.

DR. KNIGHT thought that the physician might have carried the contagion.

DR. SHATTUCK stated that the nurses and patients were isolated, and the physician made his visit on those affected last. The soiled linen, etc., was washed separately, and everything was done to prevent the spread of the disease.

DR. KNIGHT and DR. WILLIAMS both said that erysipelas was very readily transmitted in hospitals.

DR. BOWDITCH, in answer to Dr. Knight, said that the first case that appeared in the almshouse during the epidemic at Vergennes, above alluded to, came without any warning. The children of three families residing near, and who had helped the patient home from school, where it had been taken ill, had mild sore throat without deaths, and after that in five or six weeks the epidemic burst out suddenly a quarter of a mile away.

DR. CHARLES P. PUTNAM said that while it was our duty to search after the sources of infection, it was also fitting that we should not be too ready to accept theories about it that were not fairly proven. He thought there was but little reason to think diphtheria very contagious, or that it was ever carried in the clothing. He had seen diphtheria in a tenement house, where there were seven cases at the same time in the upper and lower parts of the house, while the middle part had escaped. He had also often been over children affected with diphtheria a large part of the day, and must have had his clothes thoroughly saturated with it, if that be possible, and yet it had never occurred in other children he had seen at the same time. He asked if Dr. Bowditch had not met with cases in Vergennes, in which diphtheria had sprung up at a distance from other cases, when he had not been able to find out its means of conveyance.

DR. BOWDITCH thought there were facts enough proved to warrant our saying that diphtheria is contagious, but he was not sure that it could be asserted that it might be carried in one's clothes. He thought that with any disease where there is doubt as to infection, the physician should be very careful about going to other patients without taking precautions. Some are not in a condition to take disease, but we should treat all our patients as if they were susceptible. He also spoke of the rules adopted by him over twenty years ago in regard to vaccination, namely, to be very particular not to take any virus from an infant who had or had had any chronic eruption.

DR. AMORY said that in the House of the Good Samaritan, some years ago, there was a case of scarlet fever in ward A. It was moved to ward B, and no other case made its appearance.

DR. RICHARDSON stated that the so-called peppermint test was considered by the Board of Health a very certain method of detecting defects in house drainage. It was very diffusive, and in one case in which he had examined a house the smell from the peppermint put into the basin of an upper water-closet was noticed in half a minute entering a bed-chamber on the same floor through a ventilator. It has been the rule of the Board of Health to have every house carefully examined in which a case of diphtheria is reported. In a very large majority of these houses a defect in the drainage has been discovered. In nearly every house in which a fatal case has occurred a defect has been found.

DR. AMORY and DR. BUCKINGHAM both had had a case where no defect had been found, and yet a death had taken place from diphtheria.

DR. MINOT asked if the soil-pipes were open at the roof.

DR. SHATTUCK replied that the gutters were connected with the drain, but that there was no direct communication between the soil-pipe and the open air.

Hypertrophic Cirrhosis of the Liver. — DR. O. W. DOE reported the following case of Hypertrophic Cirrhosis of the Liver, and showed the specimen :

The patient, a man thirty-two years of age, entered the City Hospital April 11, 1878, in a semi-moribund condition. His friends gave the following history of his illness so far as they knew : During the past ten years he had drunk freely of liquor, though he had never suffered from delirium tremens. Last summer he began to lose flesh very rapidly, losing fifty pounds in three months. Since then he had complained of feeling very weak, and they noticed about four months before entrance that his skin was becoming jaundiced. On April 7th he was quite "shaky," and had several chills. For a week before this he had been drinking unusually hard, and had taken considerable laudanum in his whisky. On the 8th his mind seemed to be wandering, and two days later he was seized in the morning with active delirium, and in the afternoon became unconscious, and was reported to have had a convulsion, the urine having been very scanty in amount for two days previous. At the time of entrance to the hospital his pulse was 132, easily compressible ; temperature 101° F. He was wholly unconscious ; the pupils were slightly dilated, but responded freely to light. His respiration was 28 in the minute, loud and labored. The abdomen above the umbilicus was occupied by a hard, resisting mass extending to a line drawn vertically through the left nipple. There was no ascites, and no œdema of the extremities. The heart sounds were obscured by the loud respiration. Urine drawn by the catheter showed a specific gravity of 1020 ; albumen, one fourth of one per cent. ; a sediment of blood, yellow granular matter, granules, and epithelial and hyaline casts in abundance. He gradually sank, and died twenty-six hours after entrance.

At the autopsy the heart was found to contain numerous ecchymoses under the visceral pericardium. Slight atheromatous degeneration of anterior curtain of mitral valve. Slight stenosis of aortic valves. It weighed one pound six ounces.

The kidneys were large and dense, the cortex being twice the natural size. One weighed eleven and a half ounces, the other ten ounces. The weight of

the spleen was two pounds fourteen ounces. It was dark, congested, dense to the touch, and measured nine inches in length, six inches in width, and two and a half inches in thickness. The liver weighed ten pounds, and measured eighteen inches transversely and seven and a half inches vertically, and on section presented a nodular appearance, with numerous protuberances of greenish-yellow color, evidently hypertrophic cirrhosis.

DER ALCOHOLISMUS.¹

THIS work, which we have received from the chairman of the State Board of Health, is a valuable contribution to the literature of this subject. Anything which throws light on the many questions involved in its discussion, questions of interest alike to the political economist, to the physician, and in fact to any one who has the interests of his fellow-men at heart, should be welcomed. We are especially glad to find in the work before us such marked evidences of earnest, faithful work.

The author, in his position as physician to one of the largest prisons in Germany, has had abundant opportunity to observe the effects of which he writes, and at the same time his training as a scientific man has preserved him from advancing those extreme, one-sided views which are only too apt to characterize enthusiastic writers on this subject. While recognizing in general the evil effects of the use of alcohol, he is able to judge intelligently of its value under certain conditions. He is in a position, too, to estimate the result of the efforts which have been made to reform the abuses, and to point out which have proved and are proving successful.

The book is a fairly exhaustive treatise on the subject. In the preface the author says: "This work will present the physiological and pathological effect of alcohol upon the individual economy, and will determine the value of alcohol as a food, as a luxury, and as a medicine; it will endeavor to show what peculiarities the consumption of alcoholic beverages in the different countries among the various peoples and races presents, and what influence it has upon the social economy, and upon the physical, mental, and moral life of the nations; finally, it will speak of the means which have been used in the various states for the control of intemperance, and will notice the results which have been obtained with them." The introduction refers to the almost universal use of some form of stimulant, and mentions some of the questions which are answered by facts derived from statistics and experiments, in the body of the work, which is divided into three parts. The first treats of alcohol, its discovery, its source, and its properties, and its effects upon the individual economy. These last naturally divide themselves into the physiological and pathological, and are fully treated of. The absorption of alcohol, its physiological effect upon the blood, the circulation, respiration, nervous system, digestion, secretion of the kidneys, metamorphosis of tissue, and, finally, its excretion, are

¹ *Der Alcoholismus, seine Verbreitung und seine Wirkung auf den individuellen und socialen Organismus, sowie die Mittel ihn zu bekämpfen.* Von Dr. A. BAER, Königlichem Sanitäts-Rath, und Oberarzt an dem Strafgefängniß (Plötzensee) bei Berlin. Berlin. 1878. Verlag von A. Hirschwald.

thoroughly worked out, the points of dispute fairly stated, and with constant reference to the literature of the subject the most probable conclusions are given.

Under the pathological effects the author considers the acute fatal alcohol poisoning and the chronic alcoholismus. The changes which occur in the economy from the abuse of alcohol, and which constitute chronic alcoholismus, are general and special. The changes in the blood and the abnormal deposit of fat, so-called "polysarcia potatorum," are spoken of as examples of the first. Where such general changes occur it is no wonder that of the various organs of the body none seems exempt from the deleterious effects of the long-continued use of alcohol, and that each in its turn is the seat of most serious pathological lesions.

To complete this section of his work the author looks at alcohol in its three-fold aspect of food, luxury, and medicine, and in this connection discusses important and interesting questions. Only in the very limited sense that under certain conditions it hinders the destructive metamorphosis of tissue can alcohol be considered as a food.

For its use as a luxury (that is, by persons in health), there is more to be said, though even here the limits within which it may with advantage be used are, according to our author, very narrow. He shows by physiological arguments, by the testimony of those who have had the greatest experience, and by facts of history that its use in cold climates and in warm is contraindicated; farther, that the popular idea that alcohol increases the power for work is wrong, with the important exception of the powerful stimulus it may give for a brief exhibition of energy, that its regular use in the army is prejudicial to health and to discipline, and that at the different stages of life, even in old age, when the powers are failing, it should be used only as a medicine. Here we find its true use, and Dr. Baer shows its value most clearly, especially in lowering the temperature in cases of fever. He completes the first section of the work by considering briefly the three principal forms under which alcohol is consumed, — brandy and other strong liquors, beer, and wine. Only against the first does the author speak as productive to any extent of alcoholismus; the other two, consumed in moderate quantities, not only are healthful, but are the most effectual means of limiting the consumption of the stronger liquors.

The second division of the work, which treats of "the consumption of alcohol and its influence upon the social economy," is divided into three parts. The first speaks of the spread of drunkenness and of the consumption of alcoholic beverages in the different countries, the second of alcoholismus and its influence on the physical life, and the third of its influence on the national prosperity and morals. The first is a most careful and useful study of the amount of alcoholic drinks produced, the amount exported or imported, number of places where they are sold relative to the population, and the amount of drunkenness. The second part shows in what ways alcoholismus affects the physical welfare of a people; first, by inducing a degeneration of the race; second, greater predisposition to disease; third, greater mortality from alcohol poisoning, delirium tremens, accidents the result of drunkenness, and suicide; and fourth, a tendency to shorten life. The third part, which treats of alco-

holismus and its influence on the prosperity and morals of the people, shows the relation between drunkenness and poverty, maintaining that the latter is a result of the former; farther, that it is a cause of ignorance, of immorality, and of crime; and, finally, that it is one of the principal causes of insanity.

In the third division of the work the author treats of the means of controlling alcoholism. He speaks very fully of temperance and total abstinence societies and their work, giving a history of their beginning in this country, and the similar efforts which have been made in other countries in more recent times. The author acknowledges that something has been accomplished by them: that they have at least proved that alcohol is not necessary for the healthy existence of the human being, and have given in the upper classes an example of moderation and abstinence which has had a powerful effect upon the lower classes. But he doubts whether, as such societies are now constituted, they will accomplish much more for the cause.

Next, he gives an interesting and thorough account of the various legal measures which have been adopted in the several countries for the control of the production and sale of alcohol, the various prohibition and license laws, duties on spirituous liquors, etc., and also the methods for directly repressing drunkenness by means of regulations affecting the seller of such liquors, and those directed against habitual drunkards. As one of the means for reforming the latter class the author refers at length to our inebriate asylums, and most heartily acknowledges the good work they have done.

As to the means which indirectly affect this question, the author speaks of the substitution of beer and wine for stronger liquors, and considers this as one of the most effective means for combating the evil. Concern for the welfare of the lower classes and the more general diffusion of knowledge throughout the community are mentioned as of importance.

As will be seen from the above sketch, the book is an exhaustive one, treating of the subject in all its phases, and enriched by statistics from all sources. For his facts about this country the author expresses himself as greatly indebted to Dr. Bowditch's articles in the annual reports of the State Board of Health of Massachusetts for 1871 and 1872.

In conclusion, we can most heartily recommend the book to any one who desires a fair and impartial statement of the present aspect of this much-vexed question, and could wish it were in the hands of all who have to legislate on this important subject.

F. H. D.

LIEVING ON THE TREATMENT OF SKIN DISEASES.¹

THESE notes, first prepared by the author for private circulation amongst the students of his class at the Middlesex Hospital, were published at their request, and have been reissued with a few trivial additions in successive editions. They were, no doubt, of value to them as suggestive of the fuller instruction received in the class-room, but they are of comparatively little worth

¹ *Notes on the Treatment of Skin Diseases.* By ROBERT LIEVING, A. M., M. D. Cantab. F. R. C. P. London. Fourth Edition, revised and enlarged. New York. William Wood & Co., Publishers. 1878.

to others. As we have before said of similar works, it is difficult to see the object in publishing books of this limited and partial scope, because the same information in better form can be obtained in the complete treatises which should be in the possession of every student and practitioner.

LATHAM'S SANITARY ENGINEERING.¹

A SECOND edition of this most excellent treatise has just been published, after having been carefully revised and enlarged to the extent of nearly two hundred pages, so as to admit of the changes and additions required by recent advances in sanitary science. We wish it were in our power to place a copy in the hands of every board of health in the State; for we know no other work containing so clear, concise, and full a statement of the points most essential for physicians and sanitarians to know in connection with drainage of houses and sewerage of towns; and there is constantly fresh evidence that such knowledge is very much needed.

JACOB BIGELOW.

SCARCELY a week has passed, and we are again called upon to pay a tribute of respect to one of the most prominent members of our profession, — one who bears a name distinguished not only in his State but throughout the country, not only to-day but from the opening of the century. Dr. Jacob Bigelow died at his residence in this city on January 10th, at the age of ninety-one years. The oldest member of the Massachusetts Medical Society, and one of a group of prominent men whose lives are intimately connected with the early history of medicine in this country, his death, after a long period of separation from his professional brethren, owing to the infirmities of his great age, brings vividly back to the men of to-day a momentary glimpse of the almost-forgotten past only to separate us more completely from a departed generation. Born but a few years after the Revolution, and graduated from Harvard in the class of 1806, his literary career began as early as 1814 with a work on botany, entitled *Florula Bostoniensis*, which to this very day is the most complete work of its kind, and the standard authority. It is not our intention to enumerate the versatile character of his talents and works; we hope at some future time to present more extended reminiscences of his early life to our readers. He was already a professor in 1815, and a few years later his beautiful plates of *American Medical Botany* made their appearance. His early lectures on the application of science to the useful arts gave a bent to his tastes and views, which ultimately terminated in his participation in the inauguration of the Institute of Technology. Recognizing the great importance of suitable provision for the burial of the dead of large cities at some point removed from the centre of population, he became the founder of the beautiful cemetery of Mount

¹ *Sanitary Engineering*. A Guide to the Construction of Works of Sewerage and House Drainage, with Tables, etc. By BALDWIN LATHAM, C. E. London: E. and F. N. Spon, 46 Charing Cross, and New York, 446 Broome St. 1878. Pp. 559.

Auburn, which has since been a model for similar burial-places throughout the country. The architectural beauties of the place are to be credited to him, he having made all the designs. The colossal sphinx was his final gift, and remains a suitable monument to his public-spirited labors. Among his medical writings, that which exerted the greatest influence upon the practice of the day was his work on self-limited diseases, which produced a marked change in the views held in regard to the treatment of acute diseases at that time. His mind, eminently conservative, exercised a healthy restraint in accepting with reserve and caution new theories on the actions of drugs or the treatment of disease. But it is his intimate association with all that preparatory work which bears fruit to-day in a society, and a school serving as models to the country, and a standard of high professional tone and culture which endears his name to the colleagues he has left behind. His name will hereafter be grouped with those whom we all love to reverence, whose work will soon be celebrated at our approaching centennial, and whose refined character it should be the ambition of our young men of to-day to emulate. His virtues and great abilities, perpetuated as they have been in two succeeding generations, called forth some eloquent remarks from Dr. Oliver Wendell Holmes, who occupied his usual lecture hour on Friday last with a tribute to the memory of the deceased, such as he alone is able to give.

A BOARD VERSUS A DEPARTMENT OF PUBLIC HEALTH.

WHEN we commented in our last number upon the Lamar Bill for establishing a department of public health, we had not yet learned the result of the meetings at Washington of the executive and advisory committees of the Public Health Association.

This week we are fortunate enough to be able to present a very interesting letter from Dr. H. I. Bowditch, who attended one of the meetings in an official capacity, giving an account of what passed, and of the conclusions arrived at by the members present at those meetings; and we commend to the attention of our readers the memorial of the Public Health Association on congressional legislation affecting the public health, which is to be found at the end of our present number.

We are glad to see that there is an almost unanimous opinion among those best qualified to judge as to the very objectionable character of the Lamar Bill, and we heartily concur with Dr. Bowditch's letter, and with the memorial in deprecating any hasty action on the part of Congress. The proposal for a provisional national health commission is a good one if taken in connection with the suggestions as to the manner of its appointment. In any plan for a permanent national public health organization the advantages seem to us to be greatly on the side of a board rather than of a department, and of any schemes which have as yet come under our notice for such an organization, that elaborated by Dr. Bowditch appears to meet the difficulties and to avoid the dangers the most satisfactorily. As to the yellow fever question, we cannot but think that if the axe is really to be laid at the root of the tree

the disease should be studied and attacked where it is endemic, and from whence it is often, if not always, brought to our shores. Here we should find our real quarantine.

Any further remarks of ours in connection with this letter and memorial would be superfluous, but we again earnestly urge all who have influence either with societies at home or with legislation at Washington to read these documents carefully, and to use their influence accordingly.

MEDICAL NOTES.

— We are glad to see that the Board of Health has passed the following regulation : —

Ordered, That no salt, or mixture of the same, shall hereafter be sprinkled, scattered, or put upon any street, sidewalk, lane, or alley of the city, without the written permission of the Board of Health. C. E. DAVIS, JR., Clerk.

It is quite time that such an abuse should be done away with.

— We extract what follows from a private letter received from a naval officer now stationed at New Orleans : " I suppose you see by Northern papers how conflicting the testimony is in regard to yellow fever. It looks as though an ignorant man could form about as good an opinion on the subject as those who have made medicine a study. Yellow fever and bulldozing are alike in this respect, — both have men to swear, point-blank, to opposite theories and facts. In one case there is jealousy among the physicians, in the other among the politicians."

— Mr. Burdett, in his excellent book on Cottage Hospitals, quotes this simple plan for the preservation of ice in the sick room : " Cut a piece of flannel about nine inches square, and secure it by a ligature round the mouth of an ordinary tumbler, so as to leave a cup-shaped depression of flannel within the tumbler to about half its depth. In the flannel cup so constructed pieces of ice may be preserved many hours ; all the longer if a piece of flannel from four to five inches square be used as a loose cover to the ice cup. Cheap flannel, with comparatively open meshes, is preferable, as the water easily drains through it, and the ice is thus kept quite dry. When good flannel with close texture is employed, a small hole must be made in the bottom of the flannel cup ; otherwise it holds the water, and facilitates the melting of the ice, which is nevertheless preserved much longer than in the naked cup or tumbler." In a tumbler containing a flannel cup made as above described, of cheap open flannel, at ten pence a yard, it took ten hours and ten minutes to dissolve two ounces of ice, whereas in a naked cup, under the same conditions, all the ice was gone in less than three hours.

— Professor Von Langenbeck, of Berlin, recently celebrated his sixty-eighth birthday. It is thirty years since he succeeded the celebrated Dieffenbach, and is still vigorous. — The order of the Iron Crown of the third class has been conferred on Professor Späth, of Vienna. — Professor Lichtheim has charge of the internal clinic in Berne for the present winter. — Professor Hitzig will soon enter the faculty at Halle, and enter upon his duties as director

of the lunatic asylum of that city. — In Paris Professor Marey was recently elected as successor of Claude Bernard in the Academy of Sciences by forty votes (Paul Bert fifteen, Charcot three). — Prof. Henri Gintrac, of Bordeaux, is dead. — Jacob Moleschott has been elected professor in the University at Rome, Italy. — Fordyce Grinnell, M. D., physician to Wichita agency, Indian Territory, reports the removal by himself of the lower portion of the left lung of an Indian boy eight years old, who had been wounded by a barbed arrow, and had pulled out this portion of the lung with the arrow. The latter penetrated between the fifth and sixth ribs, a little to the left of the median line. Twenty-four hours after the injury, the doctor saw the case. Meanwhile the "medicine man" near at hand had failed to cause the lung to return by his enchantments. When the doctor arrived the protruded portion of lung was congested, and fast becoming gangrenous. The extended portion of lung was ligated and removed; the cut surface touched with perchloride of iron, and returned within the small opening made by the arrow. The portion of lung removed was four and one half inches long and two and three fourths inches broad at its widest part. Some degree of suppuration took place, and two weeks after the ligature came away with a quantity of pus, since which the boy has steadily improved, and is now beginning to resume his wonted sports.

— A case is related of a cavalry soldier whose horse fell upon him, causing instant death. The right auricle was ruptured, and was the only lesion found. The writer remarks that true traumatic rupture of the heart is rare; that is to say, rupture produced by external pressure or shock, without aperture in the thorax, and with perfect integrity of the organ in all its parts.

— In the case of Aiken vs. The Illinois State Board of Health, the appellate court has just rendered a decision sustaining the ruling of the lower court, and thus further confirming the board in its right under the law, for unprofessional conduct, to deprive a practitioner of his license to practice.

— Dr. Ortille reports the following case in the *Bulletin de Thérapeutique*: A man sixty-two years of age, who for some time had suffered from symptoms of cerebral thrombosis, dizziness, disturbances of vision, and formication, was one day suddenly prostrated as the result of an embolus. Friction, revulsives, and stimulants were resorted to, and within a few weeks the hemiplegia also disappeared. The attack was accompanied by vomiting, which lasted for twenty-four hours, and this was succeeded by hiccough, for which almost every conceivable agent was resorted to in vain. As the singultus continued even while the patient was sleeping under the influence of a subcutaneous injection of morphia, his strength failed rapidly. The attending physician now made a hypodermic injection of 0.025 muriate of pilocarpine, when profuse diaphoresis and a copious flow of saliva came on, and the singultus quickly ceased.

The author claims that this is the first time this preparation of jaborandi has been tested in so rebellious a case, and bespeaks for it a careful examination in the future.

PHILADELPHIA.

— During the year the Pennsylvania Society to Protect Children from Cruelty has continued its noble work of ameliorating the sufferings of those who are too young to defend themselves from injustice and inhumanity. The cases that came before the society last year involved the custody of 980 children,

of whom 274 were taken from parents and guardians, and suitable and comfortable homes provided for them in private families and asylums. Seventy-five persons were taken into custody for brutal treatment. In several cases young girls have voluntarily sought the protection of the society against the dishonoring greed of their parents.

— The Pennsylvania Hospital for the Insane, near Norristown, is rapidly progressing. A modification of the plan has been adopted, by which some existing farm structures shall be used temporarily as the administration building, it being expected that the wards will be ready for use and turned over to the state authorities during next summer.

— The total mortality of Philadelphia for 1878 was 15,498, a decrease of 606 as compared with 1877. Of these there were males 7751, females 7747, including 3828 boys and 3478 girls. The number of deaths of children under five years of age was 5853, and of persons over seventy years 1763. Among the principal causes of death were consumption, which is credited with 2430; pneumonia with 809; convulsions, 702; heart disease, 524; and croup, 373. Of the zymotic diseases scarlet fever carried off 544, diphtheria 449, and typhoid 370.

It is curious to observe that the proportion of women who live to attain the age of eighty and over is almost twice as much as in the other sex. Of the 688 valetudinarians whose deaths were announced by the *Public Ledger* last year the following table will give the relative number and the sex at each age:—

Ages.	80	81	82	83	84	85	86	87	88	89	90	91
Men.	34	30	24	29	24	18	21	11	12	15	9	2
Women.	65	36	50	22	45	29	33	23	26	15	17	8
	—	—	—	—	—	—	—	—	—	—	—	—
	99	66	74	51	72	47	59	37	33	30	26	10
Ages.	92	93	94	95	96	97	98	99	100	101	102	107
Men.	9	3	5	4	1	4	3	2	1			=261
Women.	12	6	6	4	2	4	1	1	5	1	2	1 =425
	—	—	—	—	—	—	—	—	—	—	—	—
	21	9	11	8	3	8	4	3	6	1	2	1 =636

Of those living beyond the age of ninety years there were forty-three men and seventy women, while in ten centenarians it is seen that nine were women.

— The old Philadelphia School of Anatomy, formerly on Chant Street, so well known to earlier generations of Philadelphia medical students, has been revived under the charge of Dr. John B. Roberts, and shows considerable vitality.

CHICAGO.

— Prof. W. S. Harris has recently made chemical analysis of quite a number of samples of starch from six or more American manufacturers without finding the slightest adulteration in any of them. The specimens included both starch used for food and that used for laundry purposes. He was led to make these examinations by a recent report of an English chemist to the effect that many samples of starch of English manufacture had been found extensively adulterated.

— Dr. W. T. Belfield has reported some experiment which he has just completed, bearing upon the question of the so-called nucleus of the red blood cor-

puscles. He has repeated Boetscher's experiments, which consist in bleaching the corpuscles with a saturated solution of corrosive sublimate in alcohol, and then staining them. The latter has claimed to find a more highly stained spot in the centre of some of the red corpuscles. Belfield has been unable to find this in human blood. Not questioning Boetscher's results, he has doubted whether they should be taken as proof of a nucleus. The reagents used coagulate albumen and abstract water, and cause a shrinking of the corpuscles, as is shown by the micrometer. Why may not the apparent nucleus be an artificial product of the reagents? To determine this question Belfield conceived the idea of bleaching blood with other reagents, and staining with both carmine and aniline. He has experimented with sulphurous acid, acetic acid, chlorine, and a freezing temperature,—all of which bleach the red corpuscles perfectly,—and with the two staining materials. With none of them has he been able to demonstrate in human blood a more highly stained spot in the centre of a single red corpuscle, although a long series of observations has been made. He has submitted his slides to several other microscopists, but no one has been able to see the appearance Boetscher describes. When by any of these processes turtle's blood (known to be nucleated) was examined, the nucleus appeared distinctly.

A NATIONAL BOARD OF HEALTH.

MR. EDITOR,—A meeting was held last week in Washington which, I think, will have an important influence on the future sanitation of this country, and I have thought you may like to lay the matter before your readers. Unfortunately, I cannot make any statement save from memory. But I shall endeavor to be accurate, and as concise as possible. It was a meeting of two committees appointed at the recent gathering of the Public Health Association at Richmond, to wit, of the executive committee and of an advisory committee of one from each State. A good representation appeared at the National Hotel, where Dr. Cabell, of the University of Virginia, president of the American Public Health Association, had called the meeting. The two committees spent most of Wednesday in informal discussion of two chief topics: First, the proper methods to be urged on Congress as to the further and more exact examination into the essential cause of yellow fever. It was evident that the prevalent opinion of the committee was that we should send a scientific commission to study it at Havana, or in South America. Quarantine of some kind was considered by all speakers as necessary, but to leave the decision of that matter to one man, as proposed in the Lamar Bill, recently offered in the senate, was considered entirely improper. One curious fact was mentioned by a surgeon of the army, namely, that in the epidemic of the fever, in 1863, at Pensacola, a double line of pickets prevented all approach to the cantonments, containing about three thousand troops, and not a single case occurred among them. In this instance, the quarantine was thorough, and *apparently* perfectly effective. The second question, deemed of much importance, was thoroughly discussed. It was: what ought to be the composition of the future national board of health? There were divisions of opinions.

very decided, as to whether the laity should be admitted to it. Some contended that the board should be composed of physicians only, while others were equally earnest that the plan of having a full representation of the laity, especially an engineer and lawyer, was all-important. One gentleman thought that a board consisting only of physicians would make it more certain that really scientific work would be done, and that an engineer, etc., could always be consulted, if one were wanted. To this I answered by the following very significant fact in the experience of our Massachusetts board, upon which we have always had an able civil engineer. After the Brighton Abattoir was built, the board was requested to make its official examination of the arrangements. On arriving at the upper story we found two large iron tanks for holding thousands of gallons of water. Our engineer had noticed the arrangements in the stories underneath, and immediately perceived that the columns would be too weak to support the heavy weight, which would press upon them, when the tanks were filled. On close inspection directly below one of them, we were shocked at finding that, already, the timbers were beginning to be crushed. The imperfections were so slight that it needed the scientific mind and eye of our colleague to recognize them; but, when once pointed out, they were plain to all of us. We of course directed that additional and complete supports should be given immediately, and that no water should be introduced until that was done. I stated that I had no doubt that, if our engineer had not been with us, the imperfection would not have been perceived until too late. Entire destruction of the building would have happened, and perhaps, in consequence of that loss, the great sanitary improvements, since gained in Brighton, would have been indefinitely postponed, owing to the severe loss accruing to the corporation from the mistake. It appeared that the architect had not been asked to provide for these tanks. They were anafter-thought of the butchers, who, being ignorant of mechanics, supposed it possible to put any weight they chose into the upper room. Similar arguments might have been used as to the importance of having practical business men and lawyers upon the board.

Again, two if not more plans were brought up by different individuals providing that the board should consist only of persons living in the District of Columbia.

I read the outlines of a plan, similar to that I advocated before the American Medical Association in 1876 at the Chicago meeting. It was as follows: (1) a Secretary of Health, appointed once in seven years by the president, with a salary equal to that of the other secretaries, and having a seat in the cabinet. He would be the presiding and executive officer of (2) a national board of health, to be composed somewhat as follows: the surgeon-general of the army, navy, and marine hospital service; the chief of the engineer corps, of the signal service, of the bureaus of education and of agriculture, etc.; and the attorney-general. These should have the control of sanitary matters, scientific and practical, so far as the United States has constitutional control of such matters, throughout the Union. It might be styled the National Board of Health, and be analogous in its powers and objects to state boards of health. This board would direct the secretary in his work. If, under extraordinary circumstances, he should

feel compelled to take independent action, he was to be directed forthwith to call a meeting of the board and report his action. Such a board should commence quietly and simply as an advisory board, waiting for new duties to be imposed on it by Congress, and more and higher powers to be given to it, as has happened in Massachusetts. The members, being officers of government, would have no extra pay. (3.) A Health Council of the Nation, composed of one delegate from each State, to be chosen by state boards of health, or by the governors of such States as had not established by law any board. This council should meet on the second week of February each year, and continue in session four days, and no longer, unless under call of the president of the United States and under peculiar circumstances, during which the counsel of such a body of sanitarians might be deemed important. Each one of the delegates should be paid — dollars per diem (necessary hotel expenses), and the traveling expenses to and from Washington.

At their meetings, the secretary should preside, and present a report of his action during the year, and ask the council to consider the propositions he would lay before them.

The council would immediately submit all such propositions to several subcommittees, who would be expected to report within twenty-four hours whether any immediate action should be recommended, or a delay for a further examination by means of scientific or other experts, with ample time and means at their disposal, so that thorough work could be done.

The council should originate measures if it chose to do so. But all such should be referred to the board of health above described, which should have the right to carry out in full or in part, or to decline to act, as in its deliberate judgment it might deem best; provided, however, that if any measure or measures, originating with the secretary or with the council, be unanimously adopted by a majority of the whole council, actually present and voting, then the national board should be compelled to carry out such recommendations.

These various plans were discussed by the two bodies acting in concert, and the meeting was adjourned.

I learn that at the executive committee meeting, held immediately afterward, the last plan was approved. But it was thought best, and it was voted not to urge any definite plan upon Congress at the present time, but to propose the appointment of a "preliminary sanitary commission," to be composed of the best men who can be found for the purpose, to be selected by the National Academy of Sciences, and their names to be sent to the president of the United States, as men most fitted for the important trust. Said commission would have two objects in view, namely: first, the thorough study of yellow fever, not only in this country, but in foreign countries, where it is indigenous, and for this our government should seek for international commissions in order more thoroughly to carry out the work. This was to be done by means of experts, and for the purposes an adequate sum would have to be appropriated by Congress. Second, it should submit a report to Congress of some plan for a national organization in reference to health.

In accordance with these views, a paper was drawn up, which is to be signed by the two committees, and to be sent to both houses of Congress.

It seems to me that an important step forward has thus been taken towards a national organization. I appeal earnestly to every member of the Massachusetts Medical Society, and others interested in sanitary matters, to sustain the committees by appeals, either personally or by letters, to the members of the house of representatives and of the senate, urging them to support the proposition for the establishment of the preliminary commission, and for an adequate appropriation. Yours respectfully, HENRY I. BOWDITCH.

SHORT COMMUNICATIONS.

MEMORIAL OF THE AMERICAN PUBLIC HEALTH ASSOCIATION ON CONGRESSIONAL LEGISLATION AFFECTING THE PUBLIC HEALTH.

WHEREAS the American Public Health Association, at its late meeting at Richmond, Va., provided for the appointment of a committee to advise with the executive committee with regard to matters of legislation coming before Congress, during the present session, which relate to the subject of public health; and whereas the association instructed the executive committee to exert its influence to secure such legislation as will best protect the public health of the whole country;

And whereas the executive committee, in conjunction with the advisory committee, have duly considered the various resolutions presented to the association, and the present condition of propositions for national sanitary legislation;

Now therefore we, the undersigned, officers and members of the executive committee and of the advisory committee on legislation of the American Public Health Association, do hereby declare our opinion to be as follows:—

I. That while, under ordinary circumstances, the association as a scientific body should hesitate to take the initiative in urging any specific legislation, yet at the present time it is expedient to state as precisely and definitely as possible our views as to what action should and should not be taken by the present Congress with regard to the public health, seeing that we believe there is great danger of hasty and unsatisfactory action on this subject.

II. That in view of the great diversity of opinion among those best qualified to judge as to methods of quarantine, and especially as to the relations which should exist between national and local systems of quarantine; of the fact that we have not as yet sufficient information to enable us to formulate any system of national quarantine which might not do more harm than good; and of our belief that there are grave reasons for apprehending recurrence of yellow fever in the United States during the coming summer, from causes which are already in the country, and which, therefore, cannot be prevented by any system of quarantine,—we believe that any legislation by the present Congress with regard to a national quarantine, either to provide a new law or to amend or enforce the present one, will be inexpedient and unwise.

We wish, however, that it shall be distinctly understood that we are not opposed to a national quarantine system, if carefully elaborated and placed in proper connection with state and municipal sanitary organizations, but we are well satisfied that it is impossible to organize such a system at the present time.

III. That it is highly desirable that Congress shall, during the present session, provide for the proper organization of a provisional national health commission.

IV. That the objects and duties of this commission should be as follows: (A.) To report to Congress at its next session a plan for a permanent national public health organization, said plan to be prepared after consultation with state boards of health, and with all those who possess special knowledge or experience bearing on this subject. This plan should include one for a national system of quarantine. (B.) That it should take charge of any investigations into the causes and means of prevention of yellow fever or other epidemic diseases which may be referred to it by Congress, selecting experts for that purpose so far as may be necessary.

One of these investigations, at all events, should be made at some point where yellow fever is endemic, and by experimental methods, as suggested in the report of the committee on the general report of the yellow fever commission, presented at the last meeting of the association.

We do not think that this commission should be burdened with any administrative duties which are not connected with the investigations just referred to, and it should in no manner be dependent upon, or be connected with, any existing bureau or department of the government.

V. That it is of the greatest importance that this commission should be composed of men well known for their scientific attainments and knowledge of public hygiene. They should be persons with whom all scientific and professional men of the country will be glad to coöperate and advise; to whom no suspicion can attach that they might consult personal interests or ambitions rather than the public good, and whose opinions when presented after due deliberation will command the respect, if not the assent, of all well-educated men. Such persons are not common, yet we are well satisfied that they exist, and that their services can be procured for this very important work.

VI. That the proper selection of these men is a matter of difficulty, and one which will require the greatest care. They can only be selected by some man or body of men competent to judge of their merits. Political or local considerations should have no weight in this matter, nor, unless there are grave legal or constitutional objections, should any officer of the government be burdened with, or allowed to assume the responsibility of, selecting them. After careful consideration of various plans proposed to secure this end, which is felt by all to be vitally necessary to success, we are of opinion that the simplest and surest method, and the one which will command the most general approval among the scientific and professional men of the country, is that Congress should request the National Academy of Sciences to designate the members of the commission.

VII. That the number of persons in the commission should not be less than seven nor more than nine; that they shall elect their own officers; and that their compensation should not be less than ten dollars per day for each and every day that they are engaged in the work of the commission, besides their traveling expenses. That the commission shall be authorized to employ such clerical force as may be necessary to carry out its work, and that the commission shall fix the rates of pay of its employees and of the experts which it may select and employ.

VIII. That a liberal appropriation should be made to meet the expenses of the commission and of the investigations which may be placed under its direction.

IX. That upon the request of the commission, the secretaries of war, of the navy, and of the treasury, and the attorney-general, shall be authorized to detail officers from their several departments to aid in the investigations undertaken, the number so detailed not to exceed three from any one department at the same time.

X. That it is highly desirable that there should be added to the standing committees of the senate and house of representatives a committee on public health.

XI. We are entirely convinced that the future of public hygiene in this country depends mainly upon the proper organization of state and local boards of health, and upon such recognition of their importance and utility by the people and their legislators that the necessary means and powers shall be granted to them, which will enable them properly to perform their duties. We believe that the general government can do much to stimulate and encourage the formation of such boards, and that an important part of the duty of the provisional national health commission which we have recommended will be to point out what can best be done to forward this object.

Such boards can do good work not only for their own locality, but for the nation, and if the nation will pay for this work it will be most cheerfully done, especially if a proper central health organization be arrived at, with which they can coöperate, as we hope and believe will be the case if the plan which we have suggested be carried out.

XII. In conclusion we would state that in our opinion the true interests of public health and of sanitary science in the United States are in grave danger at the present time, and that it is the duty of all professional and scientific men, both as individuals and as members of learned societies, to endeavor to prevent premature legislation, which is now threatened, but

which we believe the great majority of our national legislators will oppose if properly informed upon the subject.

(Signed :) James L. Cabell, M. D., Professor University of Virginia, President Am. Pub. Health Ass.; John S. Billings, M. D., Surg. U. S. Army, First Vice-Pres't Am. Pub. Health Ass.; Edward H. James, M. D., Ass. San. Sup't Health Dep. City of New York, Secretary Am. Pub. Health Ass.; C. B. White, M. D., New Orleans, La.; T. J. Turner, M. D., Medical Inspector U. S. Navy; E. M. Hunt, M. D., Secretary State Board of Health, New Jersey; C. F. Folsom, M. D., Secretary State Board of Health, Mass.; H. I. Bowditch, M. D., President State Board of Health, Mass.; James E. Reeves, M. D., Wheeling, W. Va.; J. M. Tower, M. D., Washington, D. C.; Thomas F. Wood, M. D., Secretary State Board of Health, N. C.; Henry D. Holton, M. D., Brattleboro, Vermont; B. F. Gibbs, M. D., Medical Inspector U. S. Navy; John Eaton, United States Commissioner of Education.

THE METRIC SYSTEM IN MEDICINE.

OLD STYLE.		METRIC.	
		Gms.	
m̄i. or gr. i. equals	.		.06
f̄zi. or ʒi. equals	.	4	
f̄zi. or ʒi. equals	.	32	

The decimal line instead of *points* makes errors impossible.
As .06 (Drug) is less than a grain, while 4. and 32. (Vehicle) are more than the drachm and ounce, there is no danger of giving too large doses of strong drugs.
C. C. used for Gms. causes an error of 5 per cent. [excess].
A teaspoon is 5 Gms.; a tablespoon, 20 Gms.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 4, 1879.

Cities.	Population. ¹	Deaths in each.	Death-Rate.	Percentage of total Deaths from				
				The Principal Zymotic Diseases.	Acute Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Diarrheal Diseases.
Brooklyn	564,500	224	20.12	20.54	17.41	12.05	3.57	1.79
Baltimore	365,000	137	19.57	11.68	15.47	8.77	1.46	
Boston	365,500	178	26.04	19.10	10.11	8.99	5.62	
District of Columbia	140,000	71	23.14	19.72	9.86	8.45	9.86	
Pittsburgh	145,000	49	17.62	20.41	8.16	16.33		
Milwaukee	122,000	44	18.57	31.52		27.27		
Providence	100,000	47	24.51	23.40	12.77	10.64	8.51	
Lowell	53,300							
Worcester	52,500	19	18.87	15.79	5.26	15.79		
Cambridge	51,400							
Fall River	48,500	20	21.50	15.00	15.00	10.00	5.00	
Lawrence	38,200							
Lynn	34,000	16	24.54	12.50	6.25		6.25	
Springfield	31,500	9	14.90					
Salem	26,400	14	27.65		28.57			
Somerville	23,250	7	15.63	28.57		28.57		
Chelsea	20,800	6	15.04		16.66			
Taunton	20,200	6	15.49	50.00		16.66		

¹ Estimated for July, 1879.

Diphtheria is very prevalent and fatal in Cleveland, prevalent in Richmond, and decreasing in Providence; scarlet fever is prevalent and fatal in Richmond. No deaths from yellow fever were reported to Supervising Surgeon-General Woodworth for the week. In fifteen cities of Massachusetts the mortality from acute lung diseases was about the same as for the previous week; from pulmonary consumption and scarlet fever somewhat increased; from the other zymotic diseases less; and no deaths were reported from small-pox.

Our last foreign returns (December 23d) show that in one hundred and forty-nine German

cities and towns, with a population of 7,419,033 inhabitants, scarlet and enteric fevers have diminished; measles, and especially diphtheria, considerably increased; whooping-cough and inflammatory diseases of the lungs and air-passages were more fatal; pulmonary consumption less so. Small-pox has slightly increased in London, and diminished in Vienna, Budapest, Paris, Warsaw, Barcelona, and St. Petersburg; very few cases were reported in Prague and Trieste. The scarlet fever epidemic has spread more widely in London and is less extensive in Birmingham.

The meteorological observations for the week ending January 4th were reported, by Sergeant Parker, in Boston, as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.			Direction of Wind.			Velocity of Wind.			State of Weather.			Rainfall. (Melted Snow.)	
	Daily Mean.	Daily Mean	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Daily Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Amount in Inches.
Dec. 29, 1878.	30.21	21	27	13	73	35	72	60	N. W.	N. W.	W.	6	8	2	C.	F.	F.	.12
" 30, 1878.	30.07	23	32	17	71	63	72	68	S. W.	N. W.	W.	6	8	2	L. S.	F.	C.	
" 31, 1878.	30.23	23	33	17	75	43	54	57	W.	W.	W.	5	10	6	C.	F.	C.	
Jan. 1, 1879.	30.05	23	33	15	67	40	61	56	W.	W.	S. E.	7	4	2	F.	Cd.	Cd.	
" 2, 1879.	29.38	21	34	10	75	95	65	78	N.	S.	W.	5	6	25	L. S.	L. S.	Cd.	.46
" 3, 1879.	29.13	12	15	2	52	53	54	53	W.	W.	N. W.	34	29	32	C.	F.	Cd.	
" 4, 1879.	29.34	22	26	19	48	42	56	48	N. W.	W.	W.	24	22	12	Cd.	F.	F.	

Weekly Summary.	Barometer.	Thermometer.	Humidity.	Wind.
	Mean 29.778	Mean 29.5	Mean 59.2	Total miles traveled, 1968
	Max. 30.292	Max. 34	Max. 100	Prevailing direction, W.
	Min. 29.044	Min. 2	Min. 35	
	Range 1.248	Range 32	Range 65	

Barometer corrected for temperature, elevation, and instrumental error.

Explanation of weather symbols: Cd., cloudy; C., clear; F., fair; Fg., fog; R., rain; S., snow; L. S., light snow; T., threatening.

Station: Latitude 42° 21'; longitude 71° 4'; height of instrument above the sea, 77.5.

MEDICAL LIBRARY.—In response to earnest requests Dr. Edward Reynolds will give more reminiscences of the older physicians Saturday evening next, at eight o'clock. Members of the profession invited. Ladies are not expected.

ERRATA.—Owing to an unfortunate delay in the mails, the corrections for Dr. Billings's article, *The Medical Journals of the United States*, published January 2, 1879, had not reached us at the hour of going to press. A number of errors thus escaped correction, the more important of which are here noted:—

Under Arkansas: for J. I. Hall read Hale. Georgia, 18th line: for Semi-Monthly Medical and Surgical Journal read *Reportory*. Illinois, last two lines: for Nos. 1-3 read 1-6; for *September* read *December*. Indiana, 5th line: for T. W. Stevens read T. M. Stevens. Kentucky, 16th line: for L. J. Frazer read L. J. Frazee. Massachusetts, last line: for five read seven volumes. Michigan, 13th line: for Western Medical Advocate, etc., read *Advantage*. Missouri, 9th line: for O. B. Knobe read O. B. Knode; for Pallen E. F. Smith read M. E. Padon, E. F. Smith. New York, 7th line from foot of page 7: for D. L. M. Piccolotto read Polrotto; 1st line on page 8: for W. Turner read U. Turner; 18th line on page 9: for Allan McLane read Allan McLane Hamilton. Ohio, 8th line from foot of page, after the word "forming" it should read, "Western Journal of Medicine and Surgery. The Western Medical Gazette. Semi-Monthly and Monthly." Oregon, 3d line: for Marion Company read County.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. C. — THURSDAY, JANUARY 23, 1879. — NO. 4.

CASES OF OVARIOTOMY.¹

BY JOHN HOMANS, M. D.,

Surgeon to Out-Patients, Massachusetts General Hospital; Surgeon to Carney Hospital.

THE following cases of ovariectomy, though few in number, are interesting as showing the value of the antiseptic method of operating in these cases. Mr. Wells, Dr. Keith, Kœberle, and others had brought the operation nearly to perfection by striving to obtain perfect cleanliness and perfect drainage. Dr. Keith's last-published series of sixty cases, done under carbolic spray, with only two deaths (and those inevitable), and with forty-one successive recoveries, are as near perfection as will ever be obtained. I suppose that what an operator will learn as he goes on is when to discontinue an operation, and either close the wound or unite the cyst walls with the abdominal incision, and endeavor to obliterate the sac by drainage. The intra-peritoneal method of treating the pedicle is the best in most cases, and there is probably but little to choose between the ligature and the cautery. The latter I have never tried. The clamp I abandoned after having a death from septicæmia, caused apparently by sloughing of the pedicle beyond the clamp. One very important element of the process of Lister, namely, drainage, seems unnecessary in an average case of ovariectomy, but the peritonæum must be carefully sponged out clean before closing the incision.

CASE VIII.² — *Multilocular Cyst of Left Ovary; Antiseptic Ovariectomy; Recovery.* — Mary R., aged fifty-eight, was admitted to the Carney Hospital August 29, 1878. The tumor had been discovered about two years before, and had increased rapidly within the last three months. The girth at the umbilical level was forty-one inches. Her general health was good.

Ovariectomy was performed, beneath carbolic spray, on August 31st. The incision was about four inches long; there were adhesions to the uterus by strong and thick vascular bands. The pedicle was tied in two halves with carbolized catgut. On examining the stump of the pedicle just before closing the incision, hæmorrhage was found to be going on from several points; these were tied in turn, and finally an-

¹ Read before the Boston Society for Medical Improvement.

² The numbers refer to the whole series of cases operated upon by the author.

other catgut ligature, surrounding the whole pedicle, was tied in the sulcus made by the first ligatures. The fluid removed weighed fifteen and a half pounds, and the cysts four and a half. The cyst walls and septa were very tough and strong, and in places cretaceous. Five deep and four superficial sutures closed the wound, which was dressed antiseptically. Flatus passed per anum on the second day. A sixth of a grain of morphia was given on the third day, and this was the only opiate required during recovery. Occasional injections of brandy were taken, and stimulants were needed for ten days. The wound was found entirely united on the sixth day. The bowels moved on the seventh day. Considerable abdominal distention and tenderness, with a rise of temperature to 102.5° , occurred on the twelfth day, due apparently to accumulation of urine and fæces. She went home well August 27th.

CASE IX. *Unilocular Cyst, probably of the Broad Ligament; Antiseptic Operation; Recovery.*—Mary M., aged sixty, was admitted to the Carney Hospital September 13, 1878. The diagnosis was that there was a cyst, probably ovarian, without adhesions. The tumor had been discovered thirteen years before, but had caused no trouble until recently from its size and weight. The girth at the umbilical level was forty-three and a half inches. Her general health was excellent. The patient was etherized on September 17th, and an incision beneath carbolic spray, about five inches long in the skin and three and a half in the peritonæum, was made. At this point the patient coughed violently, and the tumor was protruded forcibly from the wound; it was seen to be covered with a delicate layer of peritonæum, beneath which it seemed to slide somewhat. This layer was divided, and the tumor tapped, emptied (it was unilocular), and teased out of its envelope, as one would tease out a wen or fatty tumor; the delicate cellular tissue connecting the cyst with its peritoneal covering being ruptured as the separation was effected, until suddenly the cyst rolled out clean and free without any pedicle. The enveloping membrane was returned, the abdominal cavity was sponged out in order that no fluid might be left behind, and the wound was then sewed up and dressed antiseptically. There had been no hæmorrhage. The whole operation from the time of making the first incision in the skin till the sutures were all inserted had consumed only seven minutes. The safety of the patient was considered of more importance than the locality of the cyst, and this was not ascertained, although the temptation to do so was strong and the risk slight, but the character of the cyst and its contents was such that there is very little doubt of its having been a cyst of the broad ligament. Four deep and five superficial sutures closed the wound. The fluid removed was clear and pale, and weighed twenty-four pounds; the cyst was thin walled, and had a circumference

of thirty-six inches; it weighed an ounce or two. Most of the fluid was thrown away by the person who weighed it, and the quantity remaining in the tub was too small to determine the specific gravity. Dr. Arthur T. Cabot, however, who kindly examined this fluid, reported that it was neutral to test paper, and contained mucin and albumen in small quantities; also a few fine granular cells smaller than pus cells, and large pavement epithelium. The recovery was immediate; the temperature rose to 100° on the second evening, and was normal afterward. The patient returned home perfectly well on the seventeenth day.

CASE X. *Multilocular Cyst of the Left Ovary; Peritonitis and Suppuration of Cysts at time of Operation; Recovery.* — Mary O'C., aged twenty-four, entered the Carney Hospital September 23, 1878. The umbilical girth was thirty-six inches. The tumor had been first noticed in November, 1877. A day or two after her entrance she began to be constipated, and to suffer from frequent vomiting of greenish fluid; she also complained of abdominal soreness, and completely lost her appetite. It was thought that she might be suffering from peritonitis, and this proved to be the case. Ovariectomy under carbolic spray was performed on September 29th. On opening the peritonæum considerable clear ascitic fluid ran out; this soon became bloody, and also contained masses of straw-colored lymph. The exterior cysts that presented themselves were of small size; a larger one, the wall of which was softened from acute inflammation, was punctured; the fluid was thick, and did not run easily; however, by holding the cysts out of the abdomen it was possible to empty them. The omentum, to which the tumor strongly adhered, was cut away with scissors, and spread out on a carbolized towel, and at the close of the operation was tied in portions and dropped back. During the operation the tumor was cut in halves, in order to be more conveniently handled. There were slight adhesions to the anterior parietes, and some hæmorrhage took place from the inflamed peritonæum. The uterus was quite red-looking, and covered more or less with recent vascular-looking lymph. The pedicle was tied with catgut and dropped back. The solid matter and unruptured cysts weighed about eleven pounds, and the fluid three pounds. The patient did not vomit after the operation, nor did she ever require an opiate; stimulants were occasionally given. She passed her urine naturally from the first, and wind by the rectum on the second day. Her recovery was speedy and uninterrupted, and she went home on the sixteenth day.

Dr. Cabot's report of the tumor is annexed:—

“Multilocular proliferous cyst. The mass was very solid, there being an immense number of extremely small cysts. The tumor with the fluid, and what ascitic fluid escaped during operation, weighed fourteen

pounds. This mixed fluid had a specific gravity of 1023. The chemical and microscopical examination was made with fluid obtained directly from the cysts. The larger cysts, of which there were two principal ones, contained a dark reddish-brown, ropy fluid, containing numerous yellowish flakes. Microscopically these yellow flakes consisted mainly of pus cells, most of which were undergoing fatty degeneration. The fluid further contained large granular cells and much granular matter. The dark color seemed to be due to a large number of shriveled blood discs of darker color than normal. The smaller cysts contained a light straw-colored fluid resembling the dark fluid, excepting that the shriveled blood cells were not present. The fluid from these cysts was of *alkaline* reaction, and coagulated solid on addition of nitric acid. I could detect no mucin. The cysts were in places covered with large yellow patches on a highly injected ground. The microscope showed the walls at these places to be thickly infiltrated with pus cells, at times recent, but generally more or less degenerated."

CASE XI. *Multilocular Cyst involving both Ovaries and Broad Ligaments; Death.*—Miss R., aged forty-eight, had been suffering from ovarian disease for about two years; her umbilical girth was forty-four inches. At the age of thirteen she had suffered from abdominal or pelvic cellulitis, which had confined her to the bed for many weeks, and had terminated in a large discharge of pus by the rectum, an abscess having emptied itself at some point into the bowel. The diagnosis was an ovarian tumor, containing one large main cyst and probably others of smaller size, and the opinion given that ovariectomy would be successful if there were not extensive adhesions discovered in the course of the operation. The operation was performed under carbolic spray, in a sunny room of a private house, on November 8, 1878. Anteriorly the tumor was free on the left side, but laterally and posteriorly it was universally adherent.

There were strong and fibrous adhesions to the sigmoid flexure, requiring careful dissection with the scalpel; there were also adhesions to other portions of the intestines, to the mesentery, to the pelvis, and to the parietal peritoneum laterally. The operation lasted an hour and a half; the tumor was finally removed and the pedicle tied. Neither ovary nor broad ligament were seen, and the pedicle sprang from the fundus of the uterus, which was elongated upwards. The tumor must have involved both ovaries and both broad ligaments, and must have got its blood supply from its connection with the abdominal viscera, as the uterine pedicle was not at all vascular. The wound, which was about four inches long, was dressed antiseptically, and the patient placed in bed, and surrounded by artificial heat. Death ensued quietly from shock fourteen hours after the operation was finished.

CASE XII. *A Burst Papillomatous Cyst of Right Ovary, with Peri-*

tonitis and Ascites; Antiseptic Ovariectomy; Recovery. — Mrs. H., aged forty-seven, was seen by me at Northfield, Vermont, in consultation with Dr. Edwin Porter, on December 27, 1878. She was suffering with peritonitis, had hectic fever, and could retain no food on her stomach. Her abdomen was covered with hot flannel embrocations, and the skin was more or less blistered. I learned that she had first noticed her tumor in the previous September, and had increased rapidly in size. Tapping had been required twice in the last six weeks, on account of dyspnoea and distress. The canula was left in the cyst for several hours after the first tapping.

The operation was done antiseptically in the kitchen of a farm-house, on a clear, cold, bright day. The incision extended from the umbilicus to the pubes. There were slight adhesions where the first puncture had been made; the cyst wall was friable, and purulent inflammation had begun on its interior surface. There was a considerable mixture of ascitic and cystic fluid in the peritoneal cavity; this was allowed to run out freely, and the abdominal cavity was then sponged out clean and dry; many patches of lymph and fragments of papillomatous tissue were thus removed. The cyst was removed piecemeal, and was found to be a papilloma. A portion of the cyst wall, about three inches long, which adhered intimately to the bowel, was cut out with scissors, and left behind. The parietal peritonæum was studded with tubercular-looking masses. It will be interesting to see if these give rise to trouble in the future. The pedicle, which was extremely short, was tied *en masse* with carbolized catgut, and left in the pelvic cavity. The operation lasted an hour and a quarter, and the patient was quite feeble when removed to her bed. Beyond an occasional enema of fifteen drops of laudanum, no opiate has been required. The wound was first examined on the eighth day; it had thoroughly united, and all the sutures were removed.

On the fourth day after the stitches were removed, the temperature rose to 99.8° F., and an abscess opened in the cicatrix, either in the track of one of the stitches or in the place where the canula had been left after the tapping, which was done several weeks before the operation. Coincidentally with the opening of the abscess the temperature fell and has been nominal since, the pus is healthy and in amount is about an ounce in twenty-four hours. I am informed that the patient's appetite is excellent, and that she is daily gaining in flesh and strength. Dr. Porter says, in a letter dated January 16, 1879, "Mrs. H. says sometimes she feels well enough to go to work."

I append a table of cases of antiseptic ovariectomy. Five of the cases were in a hospital room opening from a large general ward; the floor of the room was always oiled with carbolic oil; and the sides wiped over with a solution of carbolic acid before each operation. No particular

TABLE OF CASES OF ANTISEPTIC OVARIOTOMY.

No.	Date.	Place of Operation.	Condition.	Age.	Duration of Spray.	Length of Incision.	Adhesions.	Treatment of Pedicle.	Weight Tumor.	Result.
1	Feb. 27, 1877.	Carney Hospital.	S.	16	1 hour.	4½ inches.	Slight and vascular, to omentum.	Tied in halves with carbolized catgut.	21 lbs.	Recovery rapid. Well, strong, and working hard in 1878. Catamenia regular since Aug. 1877.
2	March 30, 1878.	Do.	S.	20	Do	5 inches.	Almost universal to anterior and lateral abdominal parietes.	Do.	29 lbs.	Recovery. Went home at the end of four weeks. Catamenia regular since May, 1878. In November, well and strong. Has gained twenty pounds in weight.
3	Aug. 31, 1878.	Do.	W.	58	45 minutes.	4 inches.	To uterus by strong and thick vascular bands.	Do.	20 lbs.	Recovery. Went home at the end of four weeks.
4	Sept. 17, 1878.	Do.	W.	60	10 minutes.	4 inches.	Dedicate cellular adhesions to envelope, like those of an easily separable fatty tumor.	No pedicle.	24 lbs.	Recovery immediate. Went home on sixteenth day.
5	Sept. 29, 1878.	Do.	M.	24	45 minutes.	4½ inches.	Slight peritoneal. Extensive omental.	Tied as in other cases.	14 lbs.	Recovery rapid. Went home on twenty-first day. Peritonitis and purulent inflammation of the cyst walls at time of operation.
6	Nov. 8, 1878.	Boston.	S.	48	1½ hours.	4 inches.	Strong and intimate to peritoneum, pelvis, to mesentery, and intestine.	Do.	42½ lbs.	Death from shock in fourteen hours.
7	Dec. 28, 1878.	Northfield, Vt.	M.	47	1¼ hours.	5 inches.	To intestine and omentum.	Tied with catgut, without transfexion. Several circular ligatures applied.	Not determined.	Recovery. A burst papillomatous cyst; peritonitis, with patches of lymph on the peritoneum, and considerable ascites were present. Patient had been vomiting, and had hectic fever for two weeks. A piece of cyst wall, adherent to intestine, was cut out with scissors, and left otherwise undisturbed.
	Dec. 18, 1878.	Stoneham, Mass.	W.	62	30 minutes.	5 inches.	Exploratory incision.	Tumor	not removed.	Recovery. Tumor solid and lobulated, attached to sacrum, ilium, and uterus. Fluid (40 lbs.) ascitic. No opiate required.

guaranties were required from spectators, as it was thought that the spray would neutralize any septic influences. It should be stated, however, that the hospital is situated on Dorchester Heights, overlooking the whole city, the harbor, and the bay, and that the air in these high rooms is always fresh and brisk. The same nurse took care of all the hospital cases, and to her good judgment much of the credit is due. I am not aware that ovariectomy was done beneath carbolic spray in this neighborhood before the date of my first case. One of the reported cases was probably a cyst of the broad ligament, but I have included it with the others, as an ovariectomy, since the diagnosis is not absolutely certain, and the operations are very similar.

I have added to the table a case of antiseptic exploratory incision.

THE USE OF THE ELASTIC LIGATURE IN FISTULOUS TRACTS.

BY WALTER ELA, M. D.

IN surgical operations the means usually employed are cutting, crushing, cauteries of various kinds, or a combination of these. The knife is deservedly esteemed *the* instrument in the surgeon's hand, but we must not regard the use of other means in suitable cases as a retrograde step in surgery. On the contrary, it is an advance. The employment of the ligature in the treatment of fistulous tracts dates back to the time of Hippocrates, and has been more or less in vogue ever since. It has been used for *nævi* in children, for operations on anæmic or elderly persons, and in cases where the locality to be operated on was a cavity or canal out of sight. The thread was made of silk, horse-hair, or lead, and it was necessary to tighten it several times after tying when the part to be severed was of considerable extent.

The *non-elastic ligature* has the disadvantage that only a small portion of tissue can be cut through; then the ligature is loose, and subsequent tightening is necessary. To obviate this the elastic property of india rubber has been resorted to, and on this account has been applied to many cases of surgery in modern times, as by Esmarch's bandage, artificial muscles in orthopædic surgery, the elastic stocking for varicose veins, and the elastic ligature.

We must not suppose that the *elastic ligature* will supplant the knife, as Chassaignac fancied of his *écraseur*, but we now know that there are localities and cases in which the elastic ligature is indicated and does singularly well.

Most of you, I imagine, know how Professor Dittel, of Vienna, discovered accidentally that the rubber cord of a girl's net for her hair cut through the scalp circularly around her head. This principle he ap-

plied later to all sorts of affections, — for instance, for the ligature of arteries, for fistula ani, for the radical cure of hydrocele, for the removal of carcinomatous mammae, in cases of adenitis in the inguinal region, and even in amputations of the leg. Later he discovered that he was not the inventor of this novel method, but that the credit of it belonged to Italy, and Dr. Grandesse Silvestri was the first to make known, in 1862, the properties of the elastic ligature in surgery. Professor Dittel acknowledges the claim of priority to Dr. Silvestri, while at the same time he claims for himself the merit of independent discovery, and of having rescued a useful mode of treatment from undeserved oblivion.

The elastic ligature, when applied, acts gently by continual circular compression, the compressed part necrosing. The slough, which is sometimes mummified, may be held in the loop of the ligature, which has cut its way out if it has been properly adjusted. When the ligature has come away we have left by the loss of substance a gaping wound. On the bottom of this we see granulations, for a fistulous tract is, in point of fact, a tubular ulcer, and the removal of the roof of it gives the granulations an opportunity to cicatrize. The gaping is very important, as it makes a broad and shallow wound, which favors cicatrization from the edges and bottom, and is a protection against the sinking of pus, and does not require much after-dressing.

Section by continual pressure may be obtained with French instruments by Dupuytren's or Gerdy's enterotome, and with English ones by Luke's double screw or Hollis's sarcotome. The same result may be secured with greater facility with the elastic ligature, since we have a good ligature introducer. In London, where much advance has been made in the practical details of this department of surgery, Hollis's sarcotome or Luke's double screw are used occasionally in exceptional cases, but recently the use of the elastic ligature has gained much ground.

The elastic ligature is applicable (1) to cachectic, debilitated, phthisical subjects. (2.) When the track of the sinus is simple and there are no collateral sinuses. (3.) When in the track we are likely to divide considerable vessels, as when the sinus goes high up on the anterior part of the vascular rectum. (4.) When the patient has a dread of a cutting instrument.

In a phthisical patient, for instance, the advantages of the elastic ligature over the knife in dealing with sinuses of an ordinary character are : (1.) That the introduction of the elastic ligature is usually painless (no anaesthesia being required), and the subsequent suffering is very slight. (2.) The patient is not confined to his bed or house, but can keep about. (3.) The rapidity of cure is generally greater. (4.) It is bloodless. (5.) There is but little suppuration, and it is a curious fact that the wound heals as the ligature passes through.

We are not confined to one or the other means, but may use the ligature as a supplement to the knife. We must remember that in a complicated case the knife is the remedy if we wish to guarantee to cure the patient.

During the past summer, in the surgical room at the Boston Dispensary and elsewhere, I have had suitable cases for using the elastic ligature, and in these cases it has served the patients very well, and I have been much pleased with the results. I have applied it in five cases of anal fistulæ (in two of the cases there were marked pulmonary signs) and in one of scrotal fistula. This last case was particularly interesting, as it was the remnants of a partially cured anal fistula, and as the track was four and a half inches long, which had existed ever since the patient was operated on five years ago. After the elastic ligature was introduced he kept about, and convalesced rapidly. The ligature came away in five days, and he was cured in a month. I may remark that this case was considered by a physician as one of urethral fistula. This man prefers the ligature, as the previous operation kept him in bed the greater part of four months.

I have used the elastic ligature also in two cases of inguinal sinuses, and in one of scrofulous sinus of the neck which hitherto had resisted all sorts of injections and compression.

To none of the patients was an anæsthetic administered, and there was no subsequent pain, but in some cases a feeling of tightness. The average time that the patients were under treatment was three weeks.

I have tried the solid rubber cord, not rubber tubing such as Professor Dittel uses, and the excellent ligature introducer of Mr. Allingham instead of an eyed stylet, or an annular probe with a wire, which Professor Dittel uses. With Mr. Allingham's instrument it is very easy to pass an elastic thread whether the sinus is complete or not. In cases of anal fistula the ligature is introduced from within the gut outwards.

The direction of the sinus must be determined first by a probe; after the ligature has been passed and drawn tight, it is fastened by means of a metal clamp, which I have had turned from solid pewter, and which is compressed on the rubber cord by means of a pair of strong forceps when the requisite degree of traction has been made on the cord. Professor Dittel ties a knot as a means of fastening the ligature, but this means is ineffectual, as the second knot often breaks, or at all events the knots easily become loose.

Before the introduction of the ligature in anal fistula, I have been in the habit of causing a free evacuation of the bowels, and then confining them for four days by opium, catechu, etc.

The time required for the elastic ligature to pull through is from five to seven days, being dependent on the length and thickness of the sinus,

on the degree of traction employed, and on the recuperative power of the patient. Of course, the more healthy the patient and the straighter the sinus, the more rapid will be the convalescence.

I find that this rubber cord of one mm. diameter can be easily stretched to eight times its length, and breaks under two and a half pounds' weight, so we can observe the constant constricting force on the walls of the sinus when the cord is tightened. When the cord is not fully stretched it does quite as well.

Subsequent treatment consists of simple carbolized oil on a little cotton-wool, and careful examination from time to time to see that there are no other sinuses. The neglect of this latter precaution is fraught with danger to the patient's welfare and to the surgeon's reputation.



A CONTRIBUTION TO OUR KNOWLEDGE OF THE CUTANEOUS DISTRIBUTION OF THE BRACHIAL AND CERVICAL PLEXUSES.

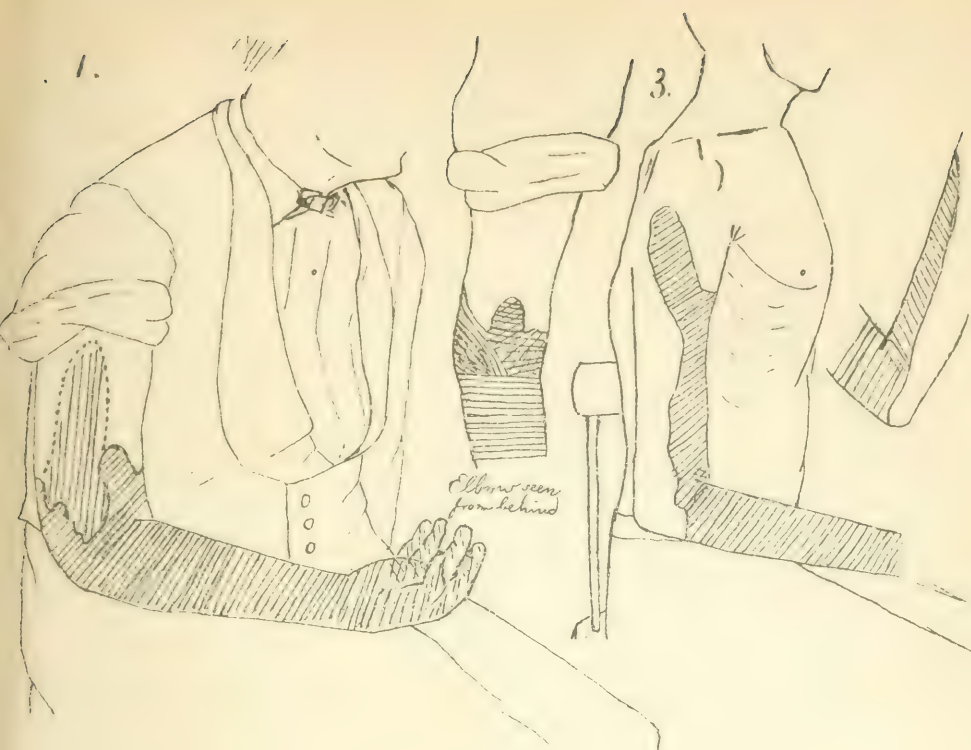
BY JAMES J. PUTNAM, M. D.

THE shaded portions of the accompanying sketches show the position of areas within which the sensibility of the skin was *completely lost* in three cases of injury, amounting essentially to destruction of the brachial plexus. The examinations in each case were made without reference to what had been found in the others, and they are published because their testimony with regard to the distribution of certain sensitive nerves indicates, by its uniformity, that these instances are to be looked upon as probably typical.

In all three cases the deltoid, in common with all the other muscles of the arms, and most of those of the scapular group, was paralyzed and greatly atrophied, and the upper portion of the anæsthetic region on the outer side of the upper arm, therefore, had undoubtedly received its sensitive supply from the circumflex nerve; the remainder, as well as the anæsthetic region on the inner side, had probably been supplied by the internal cutaneous.

It is striking what a small area seems to have composed the *exclusive* domain of the circumflex nerve, and how large a space is supplied, in part, by the lower branches of the cervical plexus.

It was impossible to determine with accuracy the *entire* distribution of the circumflex and internal cutaneous, because, as in all such cases, the region of blunted sensitiveness probably appeared smaller, even at the time of the first examinations, than it would have been found had the patient been in a fit state to examine immediately after the accident. Slight impairment of function in the areas common to two or more adjacent nerves, under these circumstances, is no doubt almost immediately compensated for by increased perceptive efforts on the part of the pa-



tient, and these quickly crystallize into increased efficiency.¹ When these patients were tested, the space over which powerful impressions were felt, while a light touch was not felt, formed a belt of pretty constant width, varying from two to three centimetres, outside the shaded areas, except in case No. 1, where it comprised the whole area between the dotted and the continuous lines.

Indeed, for case No. 1 we are compelled to conclude either that the circumflex was less severely damaged, or that its *exclusive* domain was more than usually contracted. Taking the partial anæsthesia as a sign of at least partial injury, however, the anatomical evidence afforded by this case corroborates strikingly that given by the others.

The methods employed in examining these cases were for the most part those which I ordinarily adopt, namely, the use of the wire brush, or, better, a single wire attached to the faradic battery, for the stronger impressions, and for the lighter a bit of string, gauged as to length, etc., by experiments on the healthy skin of each patient. In the diagrams the shaded parts indicate the anæsthetic areas.

The absence in the drawings of the usual outline of the arm and shoulder is due to muscular atrophy, which was most noticeable in Case 3, being partially masked in 1 and 2 by the presence of abundant subcutaneous connective tissue.



A CASE OF UNUSUAL INJURY FROM A CIRCULAR SAW

BY GEORGE JEWETT, M. D., FITCHBURG.

JUNE 19, 1877, a young man was engaged in polishing a large circular saw, in rapid motion, when his clothes were caught by the teeth, and the anterior aspect of the right thigh was drawn upon the saw with the following results: The saw entered the thigh about six inches above the articulating surface of the knee-joint, cut off all the soft parts to the bone, the fascia lata, rectus, and triceps cruris being entirely severed. The anterior articulating surface of the external condyle of the femur was sliced off an inch and a half in diameter. This cut in the bone looked obliquely outward. At this period of the accident the joint having been entirely laid open, and the flap containing the patella having dropped down, the relation of the knee to the saw changed, and a vertical cut was made nearly parallel to the long axis of the femur, one inch from the first cut toward the median line. In this condition the wound was presented for treatment. The patient was thoroughly etherized, the ridge between the two bone cuts was removed, and the jagged anterior surface of the condyle smoothed off. To prevent accumulation of fluid in the synovial sac, a finger was passed into the most

¹ Vide Létievant, Sections nerveuses.

depending part, and a bistoury pushed through externally near the head of the tibia. A new gum catheter filled with small holes was used for a drainage tube, and the joint well washed out with carbolized water.

The patella, like other parts in this region, had also been badly torn on its outer margin and articulating surface by the saw teeth. These fragments and inequalities were pared off, and the parts restored as far as possible to their normal position, and there retained by sutures. I now observed considerable loss of substance in the soft parts covering the external condyle. This gap was filled with carbolized lint, and the leg laid upon a straight ham splint: a carbolized compress enveloped the whole joint, and over all a roller was passed from the ankle to near the body, and the patient having suffered but little from loss of blood or shock was left in a comfortable condition. During the first four days the dressings were undisturbed, after which the compresses were removed, and but slight discharge was observed either from the cut surface or from the drainage tube. At no time did there seem to be fluid in the joint, and at the end of ten days the improvised drainage tube was removed permanently. The opening, however, did not heal for several weeks, but continued to wear the pouting everted lips peculiar to a fistulous opening.

The degree, duration, and locality of the pain suffered are worthy of remark. At no time was there much pain in the region of the wound, but for the first ten days it was mainly confined to the ankle and foot of the affected limb, and from this time to advanced convalescence it was almost entirely in the well knee, ankle, and foot, for the relief of which morphine was given somewhat freely. Convalescence was prolonged by two troublesome incidents: the granulations which filled the gap in the parts covering the external condyle were soft, flabby, and liable to bleed. Healthy skin was finally obtained after continued graduated compression, with occasional application of arg. nit. in stick. The other difficulty arose from the repeated absorption of portions of cicatricial tissue in the flap (which seemed to unite by first intention) apparently from lack of sufficient nourishment.

The thigh on the affected side is somewhat atrophied, and measures at the body more than two inches less than its fellow, fifteen months having elapsed since the accident. Although the leg cannot be perfectly flexed upon the thigh, and is still both smaller and weaker than its fellow, the patient now walks without limp, halt, or other evidence of the terrible wound from which he has thus far recovered.

RECENT PROGRESS IN GYNÆCOLOGY.

BY W. H. BAKER, M. D.

Antiseptic Treatment in Ovariectomy. — The readiness with which the profession have adopted Lister's method and applied it to ovariectomy since the first regularly published case by Dr. Sims in the *New York Medical Record* of December 2, 1876, shows the importance with which it is regarded; and there can scarcely be a question at this day that it is the most progressive step which has been taken for some time in the treatment of this highly important branch of gynæcological surgery. We can perhaps better appreciate its importance when we consider the success which has so repeatedly attended this method of treatment, even in the general hospitals and surgical wards, where we should expect to obtain only the worst results, and where formerly only death awaited those who were operated upon under its influences. Even among those who have proved themselves the most successful in performing this operation the importance of using the above method more or less perfectly has been felt; the same cases which have heretofore been considered as making a good recovery with the aid of means to lower the temperature of the body now recover, when treated antiseptically, without the use of any such means. Prof. T. Spencer Wells, in a lecture delivered at the Royal College of Surgeons of England, and reported in the *British Medical Journal* of July 20, 1878, refers to this subject in the following words: "I may say that, in antiseptic ovariectomy, fever is the exception, whereas formerly it was the rule."

The strongest objection which has been raised against the antiseptic treatment in ovariectomy is the chilling influence of the spray. That this is considered so serious an objection that this part of the method is omitted by some prominent ovariectomists we are well aware. We also learn from the report of the lecture already referred to that Mr. Wells had entertained the same doubt as to the advisability of exposing the abdominal cavity to this influence. From the opinion of Mr. Lister himself, however, in regard to its necessity, in support of which Dr. Keith says his trials before using the spray were much less satisfactory than they have been since, and confirmation of which we doubt not would be found in the experience of a score of operators in this country, we feel assured in insisting upon this part of the method, confident that when the fact of its necessity is once received, its objectionable points will be greatly diminished by the increased care which will be given to the protection of the abdominal cavity and its contents when it becomes advisable to enlarge the original incision.

The minor objections of the increased trouble which the spray occa-

sions, and of the explosion of the spray-producing apparatus, which we have known to occur in one or two instances, are hardly worth referring to; for no one would weigh an increase of trouble against an increase in the patient's chances of recovery, and with the greater perfection of the atomizer, both the trouble and the danger from explosion become very small. From the evidence which we have been able to collect on this general subject, both from published articles and opinions personally expressed, we are forced to the belief that each step in the antiseptic method as generally practiced is a necessary one, and that the ovariectomist who omits one or more of them will oftener be obliged to use means for lowering the temperature in his after treatment, and to see his patient making a slower recovery than if he were faithfully to carry out the whole of this most valuable method.

Batley's Operation for Extirpation of the Ovaries. — Dr. Robert Batley, in an article entitled Extirpation of the functionally Active Ovaries for the Remedy of otherwise Incurable Diseases, published in the Transactions of the American Gynecological Society for 1876, refers to the first case where this operation was performed, which he reported in the *Atlanta Medical and Surgical Journal* four years previously, and then gives the details of ten cases, including the one just mentioned, where one or both ovaries had been removed.

At the next meeting of the said society he continues the subject in a paper entitled Is there a Field for Batley's Operation? published in its Transactions for 1877, and refers to two additional cases upon which he had operated. In two of his cases the operation had been performed through an abdominal incision; in the remaining ten through the vagina. The results of the twelve cases were: four cured, two improved, four not improved, and two died of peritonitis. In conclusion, he presented the following propositions:—

(1.) "In those cases of absence of the uterus in which life is endangered or the health destroyed by reason of the deficiency, the removal of the ovaries is at once the hopeful and the only means of permanent relief.

(2.) "In cases where the uterine cavity or vaginal canal has become obliterated and cannot be restored by surgery, if grave symptoms be present, the removal of the ovaries becomes a last and only resort, and may be hopefully invoked in the case.

(3.) "In cases of insanity or confirmed epilepsy, depending upon uterine and ovarian disease, the operation is justifiable as a last resort, and when other means of cure have failed.

(4.) "In cases of long-protracted physical and mental suffering, dependent upon monthly nervous and vascular perturbations, which have resisted persistently all other means of cure, the question of a resort to the operation is to be committed to the prudent judgment of the conscientious practitioner in each particular case."

In the *British Medical Journal* for December 15, 22, and 29, 1877, Dr. J. Marion Sims reports seven cases in which he had performed this operation, four of them having been through the vagina and three through the abdominal incisions. The results in these seven cases were : one cured, one improved, three made worse by the operation ; in one case the operation was not finished, and one died of peritonitis. Both of these surgeons seem to have preferred the operation by the vaginal route at a certain period of their practice, from the greater safety which it offered to the patient, and the increased facility which it gave to the operator ; but it was found that when any adhesions between the pelvic viscera were present (which could not always be determined beforehand), the ovaries were often so included in the adhesions that they could not be removed entire, and thus the effects of the operation were lost, and in some cases the patient made much worse by it. This led both operators to return in most cases to Battey's original method of performing the operation through the abdominal incision. The inferences which Dr. Sims draws from these cases of his own and those of Dr. Battey are : —

- (1.) Remove both ovaries entire in every case.
- (2.) As a rule, operate by the abdominal section.
- (3.) If we are sure that there has been no pelvic inflammation, no cellulitis, no hæmatocele, no adhesion of the ovaries to the neighboring parts, then the operation may be made by the vagina, but not otherwise.

Dr. Sims would also add to the propositions of Dr. Battey enumerating the classes of cases which would necessitate this operation : —

(1.) "In those cases of fibroid tumors of the uterus attended with incurable hæmorrhages that endanger life, when the tumors cannot be safely enucleated and removed, this operation may be resorted to with the hope of arresting the bleeding and the prospect of diminishing the tumors.

(2.) "In cases of chronic cellulitis and of recurrent hæmatocele, when the attacks are traceable to the disturbing influences of the menstrual molimen, we may have recourse to this operation as a *dernier ressort*."

It is greatly to be regretted that in the report of these cases there has appeared no account of the microscopical appearances of the ovaries removed ; for we can but feel that so important a subject should be studied with the greatest care and thoroughness, and certainly with all the aid which a knowledge of the structural changes which have taken place could give it.

Dr. George J. Engelmann¹ reports three fatal cases in his own practice, and gives a most carefully prepared table of forty-one cases where

¹ American Journal of Obstetrics and Diseases of Women and Children, July, 1878

this operation had been performed, and later¹ adds six cases to this list, the reports of which he had received. Of the forty-seven cases in all, but forty-three could be utilized in making up the following percentages:—

The result of the operation, as regards the danger to life, was 32.5 per cent. of deaths and 67.5 per cent. recoveries. Of the twenty-nine patients who survived the operation, 20.9 per cent. of the whole number operated upon were cured; 13.9 per cent. were greatly improved; 11.6 per cent. somewhat improved; 13.9 per cent. not improved; and 6.9 per cent. made worse. The success was greatest and the percentage of deaths smallest in those cases in which both of the normal ovaries were removed to bring about the menopause and to check hæmorrhage. A less favorable result was obtained in cases of ovaritis and ovaralgia with degeneration of the ovaries.

The analysis of these cases quite supports the opinion of both Dr. Battey and Dr. Sims in their preference for doing the operation through the abdominal incision, as well as in the advisability of removing both ovaries.

With the results thus far attained we think there is no danger at present of the operation being unnecessarily performed, but that it will remain a *dernier ressort*.

Successful Operation on a very large Vesico-Vaginal Fistula in a Child Eight Years of Age.—Dr. J. J. Kirk Duncanson² reported to the Obstetrical Society of Edinburgh, December 12, 1877, the following case, which was operated upon by the late Professor Simon, of Heidelberg, which is the only case which we remember having seen reported where so large a fistula was successfully operated upon in so young a child. The fistula had formed as a result of a stone in the bladder, the vesico-vaginal septum having suppurated, and the defect of the bladder measuring five and a half centimetres in its length and one centimetre in its greatest breadth, and extending from within one centimetre of the orifice of the urethra nearly to the lip of the os uteri, then across the vagina to the cul-de-sac of the opposite side. The stone, broken by the lithotrite and removed, weighed six hundred and ninety-three grains. The closure of the fistula was accomplished by five operations extending over a period of nearly three years. An attack of diphtheritis of the vagina following the third operation, and of severe hæmorrhage from lateral incision of the vagina following the last operation, were serious complications. The great skill of the surgeon was remarkably displayed in being able to accomplish such a result where the walls of the fistula were so extremely thin, and where it was necessary to work through so small a vagina.

¹ St. Louis Medical and Surgical Journal, August, 1878.

² Edinburgh Medical Journal, February, 1878.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

A. M. SUMNER, M. D., SECRETARY.

DECEMBER 16, 1878. *Symmetrical Gangrene of the Extremities*.—DR. J. COLLINS WARREN read a paper on Symmetrical Gangrene of the Extremities, which was published in the JOURNAL, January 16th.

DR. T. B. CURTIS wished to notice in this connection how little attention is paid to French sources of investigation. While English and German authorities are as a rule pretty well ransacked, the French sources are overlooked.

DR. F. W. DRAPER asked if the terms local syncope and local asphyxia were not simply appearances of the parts affected rather than true symptoms.

DR. WARREN answered that the absence of blood was termed syncope, while local asphyxia was an expression drawn from a term designating a condition popularly called "black in the face," — black without actually becoming gangrenous.

DR. INGALLS inquired if in the cases reported by Dr. Weir Mitchell the first symptoms of local syncope were alluded to or spoken of.

DR. WARREN said that in some of the cases they were alluded to, but in others they were passed by unnoticed. Where they had arrived at true gangrene the patients possibly had overlooked the earlier symptoms.

DR. J. J. PUTNAM remarked that he had seen one marked case of local asphyxia, such as Dr. Warren had spoken of. It was in the person of a young man accustomed to out-of-door life, and otherwise perfectly healthy. The affection had already lasted a year or two. Whenever he went out-of-doors, even in summer, the hands, especially those portions supplied by the ulnar nerves, would turn white, afterwards again becoming of normal color after passing through the blue stage. It was also noticeable that the parts were painful, not as Dr. Warren had stated during the algid stage, but while the normal color was coming back. Vulpian raises the question whether these changes are due to disturbances of function of the local peripheral ganglia controlling the circulation, or to disturbances in the action of the spinal vaso-motor centres, and considers the former explanation as a possible one for some cases. Dr. Putnam thought that both causes might exist, it being probable that the local and the central ganglia act and react on each other both in health and disease. In this connection he said that he had seen a case where, in consequence of injury of the brachial plexus, the whole hand had become cyanotic, while all the nerves of the arm were paralyzed. After a time the ulnar nerve, with its cerebral and spinal nuclei, recovered its control over the muscles supplied by it, and at the same time presumably over the blood-vessels of the outer portion of the hand. In consequence of this the color of that part of the hand became again natural, standing in marked contrast to that of the rest of the hand. Dr. Putnam's theory was that this resulted from a resumption of the controlling or inhibitory action which the spinal centres normally exercised upon the peripheral vaso-motor ganglia. Dr. Putnam also

agreed with Vulpian that there seemed to be no reason for assuming contraction of the veins, besides that of the arteries, to explain these local asphyxias.

DR. C. P. PUTNAM remarked that he had seen a case of the so-called syncope and asphyxia of the fingers in a young lady of good health, where it had apparently been due to cold morning baths, as it had not occurred since the baths were given up. In the first stage the affected finger, generally the middle or third finger on either hand, became white and the skin wrinkled; soon after became intensely blue or purple; and finally recovered its color in an hour or two, with considerable tingling. The patient always found that the quickest way to get rid of an attack was to heat the back before a fire or by hot air from a furnace, though it seems likely that this was only because the whole body was most easily heated in this way.

DR. C. H. WILLIAMS asked whether, as the ophthalmoscope showed diminution of the calibres, there was any deficiency of vision, and whether it was permanent.

DR. WARREN replied that there was intermittent disturbance, but did not think that the disturbance was permanent.

DR. HILDRETH inquired if there was any material difference of color, in these cases, from senile gangrene.

DR. WARREN said that authorities undertake to make out a peculiar shade in the local asphyxia, but after the gangrene appears there is very little difference. Dr. Warren thought that there was a difference in this respect between a case of embolic gangrene and the case reported, as seen by him at the same time.

Scarlatina. — DR. MINOT remarked that he had seen a case which might be of interest. He was called to see an infant with scarlatina. Two months before it was born the mother and two children passed through a very severe attack of the same disease. It would certainly seem as though the infant was protected, but such was not the case.

Jaborandi. — DR. WEBBER wished to state his experience with Metcalf's preparation of jaborandi. He had given it in twelve cases with no effect, and in one case with slight effect. He then had an infusion made with the dried leaves at the City Hospital, and obtained a marked effect in most cases.

DR. MINOT had had the same experience, but when he ordered three or four drachms of the leaves to a pint of water, and had the mixture boiled until it measured half a pint, and drunk hot, he had obtained marked effect.

POWELL ON CONSUMPTION AND ON CERTAIN DISEASES OF THE LUNGS AND PLEURA.¹

WE take pleasure in calling attention to this truly valuable work, which comes to us from Brompton Hospital, whence we have already derived so many treatises on consumption. Although intended to be chiefly clinical in character, the book begins with a short discussion of the pathological changes which diseased lungs present post-mortem, and it is here, at the start, that the author

¹ *On Consumption and on certain Diseases of the Lungs and Pleura.* By R. DOUGLAS POWELL, M. D. London. 1878.

wins the reader's confidence by the calm, conservative manner in which he handles many disputed points.

In considering the relations of the tubercular to the inflammatory lesions he seems to lean toward Niemeyer's theories, though he modifies the views of the latter in many respects according to his own personal experience and observation.

With regard to hereditary influence, he says that the tendency of modern research is to show that tubercle is more commonly a secondary disease, and that people are very exceptionally, if ever, born to die of tuberculosis. He does not thereby mean to deny, however, the possibility of a hereditary predisposition to tubercle or other forms of consumption, but he does think that this predisposition, however strong it may be, gets fewer opportunities of being nursed into confirmed disease by reason of the superior hygienic knowledge of the present time.

In Chapter III. he gives a vocabulary of the physical signs of the chest, with an accompanying interpretation of each sign according to its "most usual significance." This feature of the book is certainly open to criticism, like all such attempts to abridge very complex subjects. Thus tympanitic resonance is said to signify "air in the pleura or greatly dilated lung," while collapsed (pleurisy) and partially consolidated (pneumonia) conditions of the lung are not mentioned, although they are by no means infrequent causes of tympanitic resonance. Again, bronchial respiration is simply said to signify "consolidation."

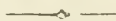
The subject of hæmorrhage in phthisis is considered under two heads, namely, Hæmorrhagic Phthisis proper and Recurrent Hæmoptysis. The term hæmorrhagic phthisis he restricts to those cases which begin with hæmorrhage, but he expresses great doubt regarding the causal agency of such hæmorrhage in producing the phthisis. Although he has seen cases where inhaled blood has formed the nucleus for fresh lobular pneumonia in the gray stage of advanced phthisis, yet he says that he has never met with a case in which an irritative lobular pneumonia could be distinctly referred to the inhalation of blood into a previously healthy lung, and he does not think that Niemeyer's cases are at all conclusive on this point. He asserts that he has long watched patients who were subject to hæmorrhage from the mucous membrane of the large bronchi and throat, but none of them have ever become phthisical, and he quotes Dr. Legg to the effect that phthisis is rare among the subjects of hæmophilia.

In regard to laryngeal phthisis, Dr. Powell believes that it commences "as a serofulous catarrh or inflammation of the mucous membrane, which speedily involves the submucous glands, and determines in some of them caseation, softening, and ulceration." He has never seen a case of miliary tuberculosis of the laryngeal or tracheal mucous membrane, but tuberculous growths speedily form around serofulous ulcerations. Laryngeal phthisis is very rare in children, and Dr. Powell has seen but one case where phthisis in a child first appeared in the larynx.

The author's remarks upon pulmonary cavities and their significance are full of good sense and sound judgment, and tend to throw much light upon the prognosis of cases where such lesions occur.

In conclusion he describes the mechanism of respiration in health and disease, and introduces a scheme for illustrating the mutual relations of lungs, mediastinum, diaphragm, etc. This portion of the book is especially instructive and entertaining to those interested in the physics of the chest.

In regard to the treatment or rather the care of consumptives, Dr. Powell is decidedly an optimist, and the book is full of tenderness and encouragement for those whose disease, even though incurable, may be robbed of much of its suffering and discomforts by intelligent, judicious treatment.



THE INFLUENCE ON HEALTH OF WORKING IN IRON.¹

THE second volume in Dr. Oldendorff's series is even more interesting than the first, reviewed in a previous number² of this journal. In eight parishes of the district of Düsseldorf, containing in December, 1875, a population of 94,036, of whom 24,756 were over twenty years of age and males, a careful examination of the vital statistics of 11,205 men engaged in the various forms of the iron industries, and a full medical examination of 895 of them by two competent physicians, have furnished the material for the treatise before us, or a thorough critical analysis of all the influences upon health and longevity of the various conditions under which workers in iron live. The civil registers of the eight parishes, the mortality tables in six, from 1850 to 1874, including 6991 deaths of persons over twenty years of age, the census and vital statistics for the year 1875, and replies to circulars with twenty questions from 895 grinders of steel have been freely and exhaustively used.

These artisans live, for the most part, in high, dry, and clean houses, which are not overcrowded, and are well supplied with open space about them. They have good food, are generally prosperous, marry early, and make very few changes in their employments. Of the grinders examined medically, 85.1 per cent. began that trade in early youth; the same proportion of all the grinders inherited the trade from parents; of the rest of the iron workers 62.1 per cent. followed the occupation of their fathers. The use of strong alcoholic liquors is common among all the workmen, although steadily diminishing in favor of beer drinking; its intemperate use is suggested as a possible cause of increased mortality. The various processes in making the different articles are described, and their probable bearing on health; seventy per cent. of the shops were found ventilated according to the police ordinances.

Of the 2272 grinders, 69 died in 1875; out of 8933 other workers in iron, 205; and of the 16,069 males over twenty years of age at work in other trades, 315. The striking table on page 80 shows that of the 895 grinders medically examined only 541 were healthy; 218 had cough, 13 bloody expectoration, 28 asthma, 76 rheumatism, 9 catarrh of the stomach, 10 various other diseases. Of this number also 542 had at various times been ill, 192 repeatedly; 139 had suffered from cough, 109 from lung diseases, 64 from rheumatism, 6

¹ *Der Einfluss der Beschäftigung auf die Lebensdauer des Menschen, nebst Erörterung der wesentlichen Todesursachen.* Beiträge zur Förderung der öffentlichen Gesundheitspflege. Von Dr. A. OLDENDORFF. II. Heft. S. 163. Berlin. 1878.

² Vol. xcvi., pp. 82-85.

from diseases of the nervous system, 185 from zymotic diseases, 25 from other diseases of the internal organs. The chief cause of death was chronic disease of the lungs, slow in its progress; it has been found to be curable, even in advanced stages, upon giving up the harmful trade, and adopting one not at all injurious.

By comparing the death-rate of the artisans in iron with that of their relatives, the author finds no positive evidence that the lung disease is hereditary, but on another page he states that the mortality from pulmonary consumption is high throughout the eight parishes. The shortening of life by these industries is not in all cases so great as one would suppose; in fact, the expectation of life among all the workmen, excluding file-cutters, filers, and grinders, at the various ages above twenty, is about the same as that of the adult male population of Berlin, although considerably less than that of the same age and sex in Prussia at large. At the age of twenty the file-cutters have 10.91 less years, and the grinders 11.92 less years of life to expect than the average Prussian man, and respectively 4 years and 5.01 years less than the average in Berlin. Indeed, of all the processes examined by our author, grinding with a dry stone, when practiced for long periods of time, is decidedly the most injurious to health.

To obviate, as far as possible, the evil effects on health of the iron industries, it is recommended that no young persons be employed in the shops; that the workmen be carefully selected as to health and strength; that the general laws of hygiene be carefully followed; and that for the process of dry grinding the Düsseldorf police ordinance be everywhere enforced, namely, of requiring powerful ventilation of the work-rooms by aspiration. What may be done by intelligent and humane employers is well illustrated by reference to the large house of Goldenberg & Co., where a hood is placed over each grindstone, so that the iron dust and particles of stone are conveyed through exhaust pipes to the external air. Of course, that is more convenient, and in some ways better, than protecting the mouth with a respirator. The workmen are advised to insure their lives, and also to seek new employment as soon as there are unequivocal signs of lung disease.

An excellent summary, a few pages of directions as to the sanitary regulations to be adopted, and a bibliography add to the usefulness of this valuable contribution to sanitary literature.

FLINT ON THE SOURCE OF MUSCULAR POWER.¹

THE question which Dr. Flint proposes to us in this little volume is briefly as follows: Is the muscular power manifested by man and animals the direct product of the metamorphosis of the elements of food ingested, or is it generated by changes in the muscular tissue itself, "this substance being destroyed as muscular tissue, discharged from the body in the form of excrementitious matter, and the waste being repaired by food"?

In the case of a steam-engine the latent energy of the fuel is developed into

¹ *On the Source of Muscular Power.* By AUSTIN FLINT, JR., M. D., New York: D. Appleton & Co.

heat by combustion, and the engine itself serves merely as a convenient mechanism for translating that heat into actual working force. In like manner, according to some physiologists the muscles and active organs of the body are merely a convenient mechanism for translating into force the latent energy of the food which is developed during the metamorphosis of digestion and assimilation.

In opposition to this theory Dr. Flint devotes a large portion of his book to an analysis of some observations made by Dr. Pavy upon Weston and other pedestrians, and shows that the estimated force value of food was sufficient to account for only a small fraction of the muscular work actually performed.

By a further analysis of some observations of his own, Dr. Flint concludes that the true origin of muscular power must be sought in the muscles themselves, and that the exercise of these muscles produces a waste which is measured by the nitrogen excreted. Indirectly, the nitrogenized food is a source of power by repairing waste and developing capacity for work; but food is not directly converted into force in the living body, nor is it a source of muscular power, except that it maintains the muscular system in a condition for work.

We have not space to enter into the many fine points involved in the argument, but we will say that Dr. Flint has convinced us that the problem in question is a very difficult one; that the methods hitherto employed for its solution have been very inadequate and faulty; and that the results thus far obtained are very unsatisfactory.

THE CONGRESSIONAL YELLOW FEVER COMMISSION.

It was hardly to be expected that Congress would refrain from sending another body of men to the South for the purpose of investigating the late epidemic. The method pursued in the organization of the commission has been so characteristic that we cannot refrain from noticing it. Of course a committee of congressmen were helpless without the assistance of experts, and as each member of that body claimed the right to nominate his own man, to say nothing of congressmen who were not on the committee, the composition of the advisory board could hardly fail to be rather miscellaneous in character. Different portions of the country had to be represented, and those who believe the homœopathic treatment of yellow fever to have yielded results worthy of investigation had to be gratified by the appointment of a homœopath as one of the experts. There were, however, some redeeming features: Dr. Woodworth being made chairman, and Drs. Bemis, Cochran, Chaillé, and Green being members. The line of inquiry has been practically that of the previous commission, and like that body its visit to the South has been, to put it mildly, a flying one. We understand the work of its predecessor will be incorporated in the report of the present board of experts, which has already returned to Washington, and will soon be prepared to give an account of itself to Congress. With all that has been done, and with what is likely to be done by a provisional national health commission, or whatever organization Congress may take into its head to make, we trust that some definite plan of procedure will be arrived at before next summer calculated to prevent a return of the disease.

SCARLATINA IN NEW YORK.

WHILE the city has been remarkably healthy in most respects during the past year, scarlatina (and this is the only infectious disease of which the same is true) has been unusually prevalent; and, indeed, a larger number of cases of it (3802) were reported in 1878 than during any preceding year. In the following table is a comparative statement of the number of cases reported for six years past during the months of November and December:—

	1873.	1874.	1875.	1876.	1877.	1878.
November,	228	198	119	201	237	408
December,	319	239	199	252	296	644

During the week ending December 28th 181 cases were reported, and since then the disease has continued to spread steadily: 224 cases being reported during the week ending January 4th, and 270 during that ending January 11th. During the latter week there were 54 deaths from the disease, out of a total number of deaths from all causes of 569.

The Board of Health is making every exertion to prevent its further spread if possible, and all tenement houses in which cases of scarlatina are reported are visited and disinfected by its sanitary inspectors; while the Board of Education is furnished every day with a list of persons sick with contagious diseases, in order that children belonging to the affected families may be prohibited from attending school as long as there is danger of the communication of such disease. Fortunately, diphtheria is very much less prevalent than scarlatina, though what there is of it seems to be of rather a severe type.

Of course, a vast number of cases of contagious diseases occur which are never reported at all; and there can be no doubt that the public schools constitute one of the chief agencies by means of which they are spread. At a recent meeting of the Brooklyn Board of Health the sanitary superintendent asked that steps be taken to exclude from the schools all children who are members of families in which there are cases of scarlatina, diphtheria, and other contagious diseases. He said that in August, when the schools were closed, there had been only seventeen cases of such disease among children, and that since the public schools had been reopened the number of cases had increased to nearly one hundred a month. An ordinance with the proposed end in view was accordingly drawn up for the consideration of the board.

MEDICAL NOTES.

—The medical profession throughout the State received with pleasure the announcement of the reappointment by Governor Talbot of Dr. Wm. J. Dale as surgeon-general. Early in the late rebellion General Dale was appointed to the office he has ever since filled, and all who have had dealings with his department bear willing testimony to the able and efficient manner in which he has discharged the varied duties devolving upon his branch of the service.

—As showing the unusual prevalence of pneumonia in Boston at the present time, an examination of the records of the Board of Health show that dur-

ing the six weeks ending January, 1878, there were seventy-six deaths, while during the same period this year there have been one hundred and eighteen, and the number weekly reported is apparently still on the increase.

— We clip the following from an editorial in the *Medical Record* for December 28th:—

“The suggestions of Professor Thomson, in his address before the Academy of Medicine, regarding the necessity of adult medical education in this country are worthy of serious consideration. In truth there are *no arrangements by which medical teaching can be given to practitioners such as is freely offered in Great Britain or on the Continent*. The question which we should seriously ask ourselves is whether it is not time that a proper *initiative* should be taken, and some suitable place selected for the delivery of lectures on special subjects by experts.”

The italics we have used are rendered necessary by the fact that the requirements suggested in this quotation have been fulfilled for some years by the “post graduate course” at the Harvard Medical School. This course comprises fourteen special subjects, and is intended for physicians of mature years as well as for recent graduates.

— In an editorial concerning A New Phase of the Homœopathic Question, the *Medical Record* says the Homœopathic Medical Society of the county of New York contains two sorts of members: “those who desire emancipation from the thralldom of dogma, and the acknowledged right to practice as their judgments dictate; second, those who practically do the same, but are not willing that the public should know it.”

— In relation to the report of the committee of the Royal Medical and Chirurgical Society upon membranous croup and diphtheria, which diseases the committee consider identical, the *Medical Press and Circular* says: “If ‘croup’ and ‘diphtheria’ can be shown to be mutually communicable, to arise from one and the same cause, and to be attended in many instances with the same constitutional symptoms, then and then only must the old distinction between these diseases fall to the ground. But with regard to this point the report of the committee is not so clear as might be desired.”

— Marotti in *Mouvement médical* says that apiol, the active principle of parsley, will bring on the menses, regulate menstruation, and quiet the accompanying pains. He asserts, too, that it has no action upon the pregnant womb.

— The Louisville *Medical News* speaks of Dr. W. H. Hammond as “that modest taper among the lights of American medicine.”

— The *Deutsche Zeitschrift für Thiermedizin* announces that of a quantity of American hams (1250) recently imported into Germany many were strongly infected by trichinae. This being the case, we would venture a wager that, although American, the hams were cured by Germans.

— Dr. John B. Biddle, for many years professor of materia medica and therapeutics at the Jefferson Medical College, is dead. He was the author of a compendium upon materia medica.

NEW YORK.

— Mr. George W. Callender, the noted London surgeon, has lately been visiting in New York, and was the recipient of many attentions on the part of the profession here, the principal entertainment given in his honor being a very large reception by Dr. H. B. Sands. During the greater part of his stay he was, like Dr. Andrew Clark, the guest of Dr. Sayre, and on Saturday, January 4th, at the request of the latter, he occupied his hour at Bellevue with some general remarks on the avoidance of pain in the dressing of surgical cases, and on the treatment of abscesses.

— The Commissioners of Charities and Correction have asked for their department for the year 1879 the sum of \$1,355,541, which is an increase of \$56,041 over that used last year. This estimate, however, includes \$60,000 for the erection of certain buildings in connection with Bellevue Hospital and the insane asylum on Ward's Island. The department, it is officially announced, does not furnish dissecting material to medical colleges outside of this city; nor are any of the bodies taken to the morgue given up for dissection, a separate burying-place being reserved for these. The commissioners state that a majority of the insane under their charge become so through alcoholic drink, and that the greater number of this class are women. They also say that seventy-five per cent. of the female inmates of the work-house are there through drunkenness, and that they have to deal with a larger number of female than male paupers.

— Female medical students could lately be seen attending a venereal clinic at which (in order that the various lesions of syphilis may be studied to the greatest advantage) male patients are always introduced in a state of complete nudity, with the exception of a blanket thrown over them, as was the case during a recent course at Charity Hospital.

— A movement is now on foot in this city for the setting apart one day in each year to be known as "General Hospital Day," when collections are to be made in all the churches, hotels, and other public places for all the different hospitals, in accordance with the custom which has now for some time been in successful operation in London and other English cities. It is stated that the average sum collected in London each Hospital Day for the last five or six years has been about £27,000. A preliminary conference in regard to the matter was recently held at St. Luke's Hospital, and at this a committee of twenty-five representatives of the various hospitals of the city, including both clergymen and laymen, was appointed to decide upon the most expedient plan of action.

— At a meeting of the Academy of Medicine, held January 2d, Dr. Fordyce Barker was elected president, and Dr. James R. Leaming vice-president. The other vice-presidents are Drs. T. Gaillard Thomas and William T. White.

— At the Roosevelt Hospital on New Year's Day there died Dr. A. Habell, who for some years past has resided and practiced in this city. He was an Austrian by birth, but was exiled from his country for political offenses, and was a man of considerable learning. He had traveled extensively in South America, and some of the results of his researches were published by the Smithsonian Institution. He was a man of somewhat peculiar and "radical" views,

and in his will, which begins, "In the name of the Supreme Being, Humanity, before whom we all bow," he bequeathed his body to any college in the city which would accept it for dissection, "in order that it might be devoted to the interests of humanity." Accordingly, Dr. Sands, one of the surgeons to the hospital, accepted the gift on behalf of the College of Physicians and Surgeons, in which he is professor of anatomy, and had the body transferred to that institution.

PHILADELPHIA.

— The first medical staff of the Pennsylvania Hospital set the unfortunate example, since followed by their successors, of resigning their fees from pay patients to the hospital. So that if one of these gentlemen should have a patient at a hotel and wish to transfer him to the hospital, he must be prepared to relinquish all claim for medical attendance. This same question of pay patients is now under discussion at St. Thomas's Hospital in London, where it is hoped they will order things more justly than in this instance.

— At the clinic on Wednesday last, at Pennsylvania Hospital, Dr. Levis exhibited, in a fleshy adult, a case of rupture of the tendon of the quadriceps femoris just above the uninjured patella, caused by muscular violence (slipping on the ice). A case almost identical with this, except that the rupture was not quite complete, had been, one year ago, under the care of Dr. Morton; with this exception the present case is unique in the hospital records.

— The out-patient department of the Pennsylvania Hospital was established about five years ago, to relieve the wards of the care of walking cases. The attendance has grown so large at this dispensary that it has recently been found necessary to provide more commodious quarters for this service, which has been accomplished by altering a building that was used during the war for soldiers, situated within the hospital inclosure on Spruce Street, below Ninth. Not far below twenty thousand cases (visits) will receive attention during the current year, which closes in May. No discrimination, as far as can be ascertained, is made between patients who are in a condition that would enable them to pay a fee to a physician and those who really deserve charity.

— By invitation of Professor Sauerast, Dr. Addinell Hewson recently gave a demonstration of the earth treatment of tumors at the clinic of the Jefferson Medical College Hospital. At the same place, on the 18th ult., the double monstrosity known as the Carolina Twins was present, and was made the subject of a clinical lecture by Prof. Wm. Pancoast.

LETTER FROM LONDON.

Medical Qualifications. — Homœopaths.

MR. EDITOR, — In a former letter I gave some account of the various registrable degrees and diplomas in the United Kingdom, and of the attempts which were made at the last session of Parliament to institute a state diploma which should be compulsory for all students before their names could be placed upon the register. In my present letter I shall endeavor to give an idea of

the signification of this registration, treating at the same time of the position held in this country by persons practicing some branch of medicine who are not on the register.

As I described in my former letter, the necessity for the establishment of a legal register resulted from the multiplicity of examining boards and the very slight control exercised over these boards by the state. By the Medical Act of 1858 it was enacted that it was not sufficient to have taken a diploma in order to become legally qualified, but the diploma must be registered in a state register. All the corporations and universities existing in the three kingdoms at the time of the passing of the act were recognized by the state, but no foreign or colonial degrees were admitted, and hence it was necessary that medical men from abroad should obtain the diploma of one of the British corporations before they could be fully recognized practitioners in the country. Although no one could become a legally qualified practitioner without being upon the register, yet registration was not made compulsory upon medical men, nor can any penalties be inflicted upon an unregistered person who, having obtained a qualification in medicine or surgery, practices according to such qualification; but without being upon the register no one can recover fees in a court of law, nor can he hold any position within the cognizance of the government, whether in the army, navy, or merchant services, lunatic asylums, work-house infirmaries, benefit societies, medical officership of health, or, in fact, any of the numerous "certainties" to which so much importance is attached by general practitioners. Similarly, the unregistered medical man cannot sign any of the certificates demanded by acts of Parliament, — those of death, vaccination, or lunacy, for example. To describe his position in a few words, though he does not expose himself to prosecution or to legal interference in any way, yet he is wholly shut out from official medicine. He cannot claim the protection of the law if in his medical capacity he be wronged by others. The law is not very different for persons who are not only not registered, but have not even obtained a diploma testifying to their possession of a fair knowledge of medicine. In this case, so far as the law is concerned, persons may practice as much as they like, and upon as many people as they can find to believe in their powers of healing; the only proviso is that they must not willfully and falsely pretend to have any title, such as physician, surgeon, doctor of medicine, apothecary, etc., which may imply that they are upon the register, or recognized by the law as holding one of these titles. Should it be proved that they have done so they become liable to a fine of twenty pounds for each offense. There is, however, a regulation which indirectly tends to bring them within the cognizance of the law. If it can be shown by any of the recognized medical corporations that an unqualified practitioner has infringed upon any of the privileges conferred on them, then they may bring an action against him in a court of law, and the practitioner may be heavily fined. As a matter of fact, the powers thus given to these bodies are rarely put in force, except by one of the bodies which ranks among the more humble corporations, and whose functions relate mainly to one of the subordinate duties of the medical practitioner. This is the Society of Apothecaries, and their efforts are devoted rather to the suppression of the "counter practice" amongst dispensing chemists than to the

punishment of quacks and amateur doctors. The license of the Society of Apothecaries enables its holder to attend patients afflicted with diseases requiring medical (as distinguished from surgical) treatment, and to prescribe, compound, and supply medicines for their cure and relief. It is held largely by that class of practitioners who dispense their own medicines, and thus combine the functions of the doctor and the druggist. Not a few of these keep an open shop, but the general body of dispensing chemists do not hold this license, and in prescribing over the counter, as they do to a very large extent, they infringe the rights of the Society of Apothecaries.

There are certain conveniences in the latitude thus allowed by the law in the matter of medical practice. For instance, there is a very large body of unqualified men who act as assistants to general practitioners, and who could not be suppressed without great inconvenience to all parties concerned. So many young men study medicine with little or no means of support for the years which must elapse before they are legally qualified that unless they were able to hold the post of assistant for a part or the whole of their student life they could never reach the goal necessary for the success of their career. The position of assistant constitutes, moreover, a very important supplement to their other practical studies, — at any rate in this country, where so little out-door visiting is done in connection with the hospitals. So few are the available hospital appointments in which responsibility is laid upon students compared with the very large number of those upon whom the sole responsibility of the conduct of difficult cases will shortly have to rest that were it not for these assistantships, in which students may have the care of patients with the knowledge that in case of difficulty they have an experienced practitioner at their back, many more newly fledged doctors would be cast into the world to puzzle along in their unaided course, only to learn a dearly bought experience at the expense of multiplied blunders and personal mortification. On the other hand, many an overworked practitioner in a poor neighborhood, whose earnings are too small to allow of his paying much out of them for the help of a qualified assistant, would be greatly embarrassed if he were deprived by law of the services of the young student who, in return for board and lodging, renders him most valuable aid without asking for money payment.

I will pass on to say a few words on the position of the homœopathic question in this country. From what I have heard and read I cannot but think that there is much less strife in this country on the subject than in America. It is a subject which rarely becomes in any way prominent, unless, as occasionally happens, a physician in a good position, or one holding an official appointment as professor or physician to a hospital, becomes a convert to homœopathy. As nearly all the homœopathic physicians go through the usual curriculum at one of the great schools of medicine and pass one of the legally recognized corporations, or even graduate at one of the universities, their legal position is as well established as that of the rest of the profession. Having received their diplomas, they are in no way interfered with by the corporation which has licensed them, for these corporations are exceedingly slow to interfere with the liberty of action of any of their members, except in questions of public or professional morality. This is as it should be, for it would be an

evil day for the advance of knowledge in medicine were a few of the senior members of the profession to constitute themselves into a tribunal to decide which line of treatment should be supported and which suppressed; or were a man to feel that his prospects in life might be blasted by such a tribunal merely because they disagreed with him on a question of principles of treatment.

The social position of homœopathic practitioners is here, as doubtless it is in America, as good as that of any practitioners in the kingdom. The human mind is so constituted that the great majority of mankind feel themselves quite able to pronounce upon subjects of which they do not know even the alphabet, and the less they know the more positive and dogmatic is their opinion. As the general public can know nothing of real medicine, so it was to be expected that a very considerable proportion of that public would have very definite views on any great question which related to medicine. There is another tendency, of the human mind which must also be taken into account,—the tendency namely, to adopt a neat cut-and-dried theory which shall act as a warm cloak to ignorance, rather than to remain in the unsheltered, unsatisfied nakedness of an undeveloped science. From the combined action of these two causes it has come that a numerous, and we may add a very intelligent, section of the public has come to believe in homœopathy, and to believe with such warmth and earnestness that its adherents would be ready to undergo martyrdom for the cause. The position of the homœopathic doctor is, then, a peculiarly happy one. Whereas the truly scientific physician knows that he is at best only half believed in by a large number of his patients, and is only too conscious that his opinion and advice are not unfrequently held of less account than that of any old gossip who may give her unasked advice upon a case, the homœopathic practitioner knows that he is working in congenial soil, that his prescriptions are treated with all the faith of obedience to a higher authority, and that the very fact of his being consulted is a proof that his patients have definitely made up their minds as to the truth of the principles he advocates.

In all these aspects the position of the homœopath is fully equal to if not better than that of the orthodox practitioner. It only remains to treat of the position the homœopathic doctors hold in the profession at large. It may be said that they have a position apart; they stand very much by themselves, but they are not actively interfered with. Consultations between them and ordinary medical men rarely take place, because it is felt that the two consultants have no common stand-point for treatment. Some few homœopaths have been admitted to medical societies, but as a rule they are refused admission. Taken generally, the attitude of the better class of medical practitioners, so far as I know it, is one of indifference. There is no question of the good faith of the majority of homœopathic doctors, but there is very decided question as to the breadth of their intellect. This is a deficiency, however, which is not so rare as to excite surprise, and so homœopathy is left to itself to make its own way in the world, and to die the natural death when its time has arrived. Nothing can be gained by quixotic tilting at the half-developed systems which are the off-spring of this half-developed age. They are in strict accordance with the spirit of the time, and as the spirit of the time advances these ill-founded systems may be expected to disappear.

SHORT COMMUNICATIONS.

A REMARKABLY LARGE FŒTUS.

BY ROBERT P. MYERS, M. D., SAVANNAH, GA.

ON the 30th of October, 1877, at nine P. M., I was called to Mary Q., a negress, aged thirty-three years, pregnant for the seventeenth time; has had seven miscarriages at from one and a half to eight months' development. She has five healthy mulatto children, varying in age from two to nineteen years. Her eldest or first-born, if living, would be twenty-two years of age. She was enormously enlarged and in great pain. I made an examination, and found the os somewhat dilated. There was some hæmorrhage and intense pain. I ordered for her fluid extract of ergot, tincture of opium, and spiritus frumenti. In an hour she was delivered with great difficulty of a remarkably large male child, dead. All means to resuscitate it failed. During the labor the pains were more severe than I have ever seen before, and the hæmorrhage was *very profuse*. Fifteen hours after delivery I took the following measurements and weight:—

Length from top of head to bottom of foot	20 inches.
Length from tip of index finger to index	20½ inches.
Length around thorax	14½ inches.
Length around abdomen over umbilicus	14 inches.
Length around hips	16 inches.
Length around head over brows	14 inches.
Length of leg from hip to heel	9½ inches.
Weight	17½ pounds.

In thirteen days the woman was attending to her household duties.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 11, 1879.

Cities.	Popu- lation 1.	Number of Deaths in each.	Annual Death-Rate, per 1000 during the Week.	Percentage of total Deaths from					
				The Prin- cipal "Zymo- tic" Diseases	Acute Lung Diseases.	Diphtheria and Croup.	Scarlet Fe- ver.	Diarrhoeal Diseases.	
New York	1,085,000	569	27.34	20.21	16.87	6.15	9.47	1.41	
Brooklyn	564,400	213	22.38	18.52	22.22	9.06	6.17	1.24	
St. Louis				12.00	18.40	6.40		2.50	
Chicago				18.24	14.19	9.46	4.05		
Baltimore	365,000	162	23.14	12.29	16.05	7.41	2.44		
Boston	356,500	168	24.58	15.06	16.07	7.14	4.76		
District of Columbia		83		18.07	15.66	6.02	4.82	3.61	
Pittsburgh		69		17.68	14.49	11.56	1.45		
Milwaukee		47		34.04	10.63	29.79			
Providence	101,000	57	29.23	19.30	22.81	12.28	1.75	1.75	
New Haven		22		22.73	18.18	18.18			
Lowell	53,300	26	25.43	11.54	19.23	7.69			
Worcester	52,500	21	20.85	19.05	9.52	19.05			
Cambridge	51,400	17	17.24	5.89	11.77		5.89		
Fall River	48,500	31	33.33	16.13	12.90	3.23	6.45		
Lawrence	38,200								
Lynn	34,000	34	26.08	29.41	17.65	17.65			
Springfield	31,500	10	16.55	20.00	10.00	10.00			
New Bedford	27,000								
Salem	26,400	11	21.73		45.45				
Somerville	23,350								
Chelsea	20,800	4	10.03		25.00				
Taunton	20,200	4	10.32	50.00		25.00			
Holyoke	18,200	13	37.25	23.08	7.69	23.08			
Gloucester	17,100	8	24.39	12.50	37.50		12.50		
Newton	17,100	7	21.34		28.57				
Haverhill	15,300	8	27.26	37.50	12.50	25.00	12.50		
Newburyport	13,500	4	15.45		25.00				
Pittshead	12,650	2	8.24	50.00		50.00			
Fitchburg	12,500								

¹ Estimated for July, 1879.

Five deaths from typhoid fever are reported in New York; two in St. Louis, Chicago, and Pittsburgh; one in Brooklyn, Baltimore, District of Columbia, New Haven, Fall River, Lowell, and Lynn. Three deaths from erysipelas are reported in Boston; two in Chicago; one in New York, Brooklyn, St. Louis, Baltimore, District of Columbia, Providence, and Fall River. Eleven deaths from whooping-cough are reported in New York; three in Brooklyn; one in Boston, District of Columbia, and Pittsburgh. Three deaths from cerebro-spinal meningitis were reported in Chicago, two in Milwaukee; one in New York, Lynn, Springfield, and Taunton. There were two deaths from measles, — one in Baltimore, and one in Providence. No deaths from small-pox. No deaths from yellow fever were reported to Surgeon-General Woodworth for this country; there was one in Havana, where small-pox is very prevalent. Scarlet fever of a mild type is very prevalent in St. Louis, and in Washington of a mild form. The returns from sixteen of the twenty cities in Massachusetts indicate an increased mortality from erysipelas, cerebro-spinal meningitis, and acute diseases of the respiratory organs; about the same as for the previous week from diphtheria and pulmonary consumption; and decreased from the remaining zymotic diseases.

The meteorological record in Boston, as given by Sergeant Purcell, is as follows: —

Date.	Barom-eter.	Thermom-eter.		Relative Humidity.			Direction of Wind.			Velocity of Wind.			State of Weather.			Rainfall (Melted Snow.)		
	Daily Mean.	Daily Mean	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Daily Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Amount in Inches.
Jan. 5.	29.65	21	30	16	85	46	70	61	W.	N. W.	W.	10	16	8	C.	C.	C.	
" 6.	29.92	16	25	12	65	46	72	61	N. W.	N. W.	N. W.	12	12	11	C.	C.	Cd.	
" 7.	31.23	23	33	17	78	48	48	58	N. W.	N. W.	S. W.	13	9	11	C.	C.	F.	
" 8.	29.97	35	43	21	56	57	61	58	N. W.	N. W.	S. W.	18	16	12	Cd.	R.	Cd.	.01
" 9.	29.52	31	36	24	70	100	100	90	S. W.	E.	N. E.	2	8	19	S.	S.	S.	
" 10.	30.22	19	27	16	68	34	69	57	N. W.	N. W.	W.	20	20	8	C.	C.	C.	1.06
" 11.	30.31	22	33	12	64	54	73	63	S. W.	W.	W.	9	13	8	Cd.	Cd.	S.	.01

Weekly Summary.	Barometer.	Thermometer.	Humidity, Saturation being 100.	Wind.	Rain.
	Mean 29.974	Mean 24.3	Mean 64.1	Total miles traveled, 2065	Total amt. 1.08 in.
	Max. 30.393	Max. 43	Max. 100		
	Min. 29.282	Min. 7	Min. 29	Prevailing direction, N. W.	Duration, 26 hrs. 40 min.
	Range 1.111	Range 36	Range 71		

Barometer corrected for temperature, elevation, and instrumental error.

Explanation of weather symbols: Cd., cloudy; C., clear; F., fair; Fg., fog; R., rain; S., snow; L. S., light snow; T., threatening.

Station: Latitude 42° 21'; longitude 71° 4'; height of instrument above the sea, 77.5.

By our latest foreign returns (December 28th) the rates of mortality are very high in the large cities of England and Scotland; in the twenty cities of England, with a population of 7,269,976, the mortality was 30.4 per 1000; scarlet fever and diseases of the respiratory organs were especially fatal. Twenty-two of the twenty-nine deaths from diphtheria occurred in London, the greatest number reported in any week for eight years. Small-pox is declining in London; no deaths were reported from any other city. Fevers were very prevalent and fatal in India; cholera to a limited extent. Small-pox was slightly prevalent in Paris, Geneva, and Naples, moderately so in Budapesth and Vienna, and rife in St. Petersburg. Diphtheria is widely prevalent in Germany.

APPOINTMENT. — Dr. James H. Denney has been appointed physician to the out-patient department for diseases of the nervous system at the Boston City Hospital.

SUFFOLK DISTRICT MEDICAL SOCIETY. — A regular meeting will be held at the hall, 19 Boylston Place, on Saturday evening, January 25th, at seven and a half o'clock. The following papers will be read: —

Dr. E. Chenery. A Case of Thrombosis.

Dr. Edward L. Parks. Santa Barbara, with some Remarks on California.

Dr. Arthur Cabot. Cases of Osteoplasty.

Supper at nine o'clock.

THE annual meeting of the New York State Medical Society will be held in Albany on the first Tuesday in February.

BOOKS AND PAMPHLETS RECEIVED. — An Atlas of Human Anatomy, illustrating most of the Ordinary Dissections, and many not usually practiced by the Student, accompanied by an Explanatory Text. By Rickman John Godlee, M. S., F. R. C. S., Fellow of University College, Assistant Surgeon to University College Hospital, and Senior Demonstrator of Anatomy in University College. Philadelphia: Lindsay and Blakiston. 1878.

Optic Neuritis, with Notes of Three Cases. By C. J. Lundy, M. D. (Detroit Lancet.) 1878.

Sugar Frauds and the Tariff. By Henry A. Brown, Saxonville. 1879.

Elements of Comparative Anatomy. By Carl Gegenbauer, Professor of Anatomy at Heidelberg. Translated by F. Jeffrey Bell, B. A., Oxford. Preface by E. Ray Lankester, M. A., F. R. S. London: Macmillan & Co. 1878. (From A. Williams & Co.)

Fifty Years Ago. An Address to the Graduating Class of the Medical College of the Pacific for 1878. By Henry Gibbons, Sr., M. D.

Transactions of the American Otological Society, Eleventh Annual Meeting, Newport, R. I., July 24, 1878. Vol. II., Part 2. Boston: Houghton, Osgood & Co.; The Riverside Press, Cambridge. 1878.

Are Inebriates Automaton? By George M. Beard, M. D., of New York. (Quarterly Journal of Inebriety.)

An Introduction to Pathology and Morbid Anatomy. By T. Henry Green, M. D., London. Third American Edition. Philadelphia: Henry C. Lea. 1878.

New and Original Theories of the Great Physical Forces. By Henry Raymond Rogers, M. D. Published by the Author. 1878.

Total Abstinence. A Course of Addresses by Benjamin Ward Richardson, M. D., etc. London: Macmillan & Co. 1878.

Health Primers. No. 3. The House and its Surroundings. No. 4. Premature Death: Its Promotion or Prevention. New York: D. Appleton & Co. 1879.

Modern Fishers of Men among the Various Sexes, Sects, and Sets of Chartville Church and Community. New York: D. Appleton & Co.

The Scepticism Prevalent regarding the Efficacy of Aural Therapeutics. By Samuel Theobald, M. D. (Maryland Medical Journal.)

Further Testimony in Favor of the Use of Large Probes in Treatment of Strictures of the Nasal Duct. By S. Theobald, M. D. (Archives of Otology.)

Medical Chemistry; including the Outlines of Organic and Physiological Chemistry, based in part upon Riche's Manuel de Chimie. By C. Gilbert Wheeler, Professor of Chemistry in the University of Chicago. Philadelphia: Lindsay and Blakiston. Chicago: S. J. Wheeler. 1879. Pp. 424.

The Localization of Cerebral Disease, being the Gulstonian Lectures of the Royal College of Physicians for 1878. By David Ferrier, M. D., F. R. S. New York: G. P. Putnam's Sons. 1879. (From A. Williams & Co.)

Abstract of the Report of the Special Committee on Croup of the Illinois State Medical Society, with a List of Eighty-Three Cases of Tracheotomy for Croup and Diphtheria performed in the State of Illinois. By H. Z. Gill, A. M., M. D. Chicago. 1878.

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LECTURES.

CLINICAL LECTURE ON ANIMAL PARASITIC DISEASES OF THE SKIN.

DELIVERED AT THE NEW YORK HOSPITAL.

BY L. DUNCAN BULKLEY, M. D.

Scabies. — GENTLEMEN: The young man whom I now show you is the subject of scabies, but unless you were to examine his case very carefully, you would hardly be led to suspect that this was the nature of his trouble. The main lesion which he presents, and to which he directs our special attention, is upon the right arm, near the elbow, where there are a number of extremely thick crusts grouped together; and the same thing is also found on the left arm, though in a less marked degree. These, however, are secondary lesions, and are merely the results of scratching, and you must look elsewhere if you would determine the true nature of the trouble in this case. The place of all others to look for the characteristic evidences of scabies is between the fingers, and after this about the wrists and upon the soft parts of the hands. In the present instance I did not at first recognize what the trouble really was; but the moment I looked at the hands I began to suspect that it was scabies, and a more careful examination of the case revealed three of the characteristic features of the disease. These were, —

First, isolated scratched papules between the fingers. Such a condition is extremely rare in eczema.

Second, one or two of what are called the cuniculi or furrows on the skin. Here, however, they are very faint, but there is one little line which is quite distinct. This is often the nearest that we can get to a furrow, but it is quite sufficient to prove the character of the affection present. The furrows are generally seen as small black lines (the dark color being due partly to the eggs and fæces of the insect in them, and partly to dirt), but sometimes they are whitish in appearance.

Third, a crust upon the glans penis. It was a French observer who first pointed out the fact that where there is such a crust (or perhaps a papule), or perchance several exist on the penis or on the scrotum we are almost certain to find scabies present upon the person. It is also not at all unusual to find well-marked furrows on the penis.

In addition, in this case, you see about the legs, and notably on their softer parts, a widely diffused multiform eruption, characterized in some places by small papules and in others almost by furuncles, and due indirectly to the same general cause, scabies, or rather to the scratching accompanying it.

The eruption of scabies, as I have remarked, is most frequently seen about the hands (and especially is this true of strumous children), but you will sometimes meet with individuals suffering from the disease upon whose hands you will look in vain for any evidence of its presence. The eruption may be situated on the arms or other parts of the body, and not a little difficulty may be experienced in the search for the location of the cuniculi or furrows, which are the sole pathognomonic sign of the disease. This one lesion which is perfectly pathognomonic is the little dark furrow (sometimes called cuniculus), which looks like a piece of fine black thread or silk in the skin. It is not, however, quite so black, and may be either curved or straight; its length varies from a sixteenth to a fourth of an inch. Such a furrow, which is generally found to terminate in a papule, vesicle, or pustule, is made by the female insect, which always burrows, while the male simply wanders over the surface of the skin. The moment she becomes impregnated she seeks a hair follicle or some natural orifice where she may get beneath the horny epidermis, and at once begins to burrow and to lay eggs. These are left all along the track in which she advances, until she gets so deep in the tissue that a papule or vesicle results from the irritation produced. As she proceeds on her way the older eggs are hatched out, and the empty shells may be seen when we excise the skin containing such a furrow, but the newer ones are all found to contain insects; while in addition to the eggs little specks are seen here and there along the track, which are supposed to be feces. In a short time after commencing her burrowing she dies. The furrows are very apt to be scratched open by the fingers of the patient, and thus the young insects are allowed to escape. The technical name of the insect is the *acarus*, or *sarcoptes scabiei*.

At the end of the furrow will usually be found the vesicle or papule. When the furrow is ascertained to be present the diagnosis is certain, but another sign almost as sure, in males, are papules or pustules on the penis, such as are met with in no other affection, as was seen in the case just before us; they are sometimes found in connection with a furrow, and sometimes not; they are of course to be distinguished from a papular syphiloderm. In females the lesions may be principally located about the breasts. Hardy states that in unmarried females with what appears to be eczema of the breast he always suspects scabies. In children, on the other hand, they are generally found upon the soft parts of the foot, and here you may sometimes see the furrows very

beautifully perfect. The plates which I now show to you will give you a fair idea of the different manifestations of scabies under different circumstances, and also exhibit magnified views of the furrows containing eggs, as well as the male and female insects themselves.

In scabies we can never be sure of a complete cure as long as a single furrow remains, because it will serve to perpetuate the colony of insects; but, as the matter is arranged in Paris, it takes only two hours to insure the patient's complete recovery. Of course, the arrangements there for the treatment of scabies are very perfect; but just as satisfactory cures can be made here (although not perhaps in such a short space of time) if the proper method is employed. The plan that I recommend is as follows: The patient should first take a warm bath, remaining in the water for half an hour, after which he should be well rubbed for a considerable time with the coarsest soap that can be procured, and be again immersed in the bath. Then he should apply whatever ointment is ordered in the most thorough manner, rubbing it in diligently, especially about the fingers and wrists. The idea of this is to have it brought in immediate contact with all the furrows.

As to the character of the ointment to be employed we must be governed by circumstances. In infants, on account of the delicacy of the skin, we sometimes cannot use sulphur ointment at all, and in such cases a very excellent substitute for it will be found in liquid storax, officinally known as styrax. It may be used in the proportion of from one to three drachms to the ounce of simple cerate. For scabies in females the following is a very satisfactory combination:—

R ⁷ Styracis	3j. ad 3ij.
Unguenti sulphuris	3ij. ad 3iv.
Cerati	3j. M.

In males we very frequently use the sulphur ointment in its full strength, but in the present instance I think it will be sufficient to employ it diluted one half, at the same time adding to the salve a little styrax or balsam of Peru. Then we must not neglect to charge the patient to pay particular attention to its application to the fingers, wrists, and penis, for it is, as I mentioned before, an essential element of success that it should be worked in, especially in these localities, in the most careful and patient manner. If he does this according to the directions given him, there can be no doubt of the result, and that the cure will be as prompt as it is complete. You should always have the clothing treated by heat of at least 212° Fahrenheit; the clothes may be boiled, or, as in the case of phthiriasis or body-lice, I frequently have them rolled in a bundle and laid in the oven, and submitted to a good baking, a board being placed beneath them to prevent scorching.

PENETRATING GUN-SHOT INJURY OF THE ELBOW AND KNEE JOINTS.

BY J. F. BUSH, M. D. HARV.

IN February, 1878, I had under my care a patient with pneumonia. There was nothing of unusual occurrence in the course of the disease, and the case would not have been brought before the profession but for a peculiar gun-shot wound which was made interesting by the result of the post-mortem examination. When I saw him he had pleuro-pneumonia, and after a few days' illness died. At various times during these few days he complained of pain in his left arm, which he attributed to his wounds, and upon inquiring I found that he had received wounds through the left elbow and the left knee during the war of the rebellion, and had at that time been under the care of Dr. J. Mason Warren, who gave the following history in his book, *Surgical Observations, with Cases and Operations*, page 563:—

“A young officer, twenty-five years of age, while stooping down, at the battle of Antietam, to tie his handkerchief around the thigh of the man next to him, who was bleeding to death, his leg having been shot away by a cannon ball, received a shot which passed diagonally through his elbow-joint and entered and lodged in his knee-joint. The elbow at the time was bent, and from the position it was in laid flat against the knee-joint. A great spout of blood at once took place from the inner wound of the arm, indicating that some large vessel had been cut off. He checked the hæmorrhage with a leather strap buckled tight around his arm. . . . He limped off on his injured leg to the nearest ambulance station, where the wound in his knee-joint was examined by a surgeon. The probe penetrated the joint freely, but the ball could not be detected. From the strongly bent position of the limb it had apparently escaped the tibia and passed in between the condyles of the femur, where it was securely lodged and concealed. His arm and leg had water dressing applied and were put in splints, and he was immediately placed in the cars and transferred to Boston, where he arrived in the course of a week with many other soldiers, some of whom had received equally serious wounds, and to whom the danger of transportation, except under existing circumstances, would have been considered almost a fatal movement. When I saw him he was in an extremely feeble condition. Belonging to a fresh body of troops, he had been marched some days before the final battle, and fought for one or two days before, subjected to great heat, his principal nourishment being green corn, which produced an almost constant diarrhœa. It is probable that to this condition he owed his safety. In addition to the above wound he was suffering from a contusion of his side. The knee-

joint I found was free from pain and inflammation, but the wound on its outside slightly suppurating. It was dressed with a ham-splint, and kept in a state of perfect rest. On examining the elbow-joint I found it quite loose, both condyles broken off, the joint swollen with an effusion; on the inside a bullet hole, below the joint on the outside and above it on the inside. The elbow was made immovable with splints; and after a moderate amount of inflammation, which at any time did not amount to anything threatening, both the knee-joint and the elbow-joint did perfectly well, so that at the end of two months he was able to go out-of-doors. He finally recovered all the motions of his elbow-joint. Now, at the end of four years, he walks without the least sign of lameness, the ball still remaining in the knee. The power of entire flexion of the leg only is wanting."

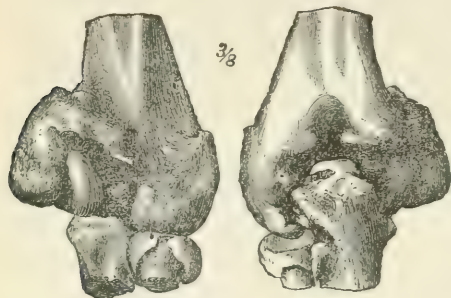
Concerning the subsequent history there is little to say. The motion of the arm increased by use, so that there was the power of complete extension, but flexion was to a degree limited; not enough to make any practical difference, but sufficiently to show that there was some trouble about the articulation. The strength of the arm was somewhat less than that of the other, but the patient being a book-keeper he had no necessity for manual labor, and, undoubtedly, had he exercised, the strength would have increased in proportion. The arm was a barometer to him, for every storm was predicted to a certainty by pain. The condition of the knee was better than the elbow as far as motion was concerned, for after the first lameness caused by the inflammation had subsided he was able to flex and extend the limb, and could walk or run without pain or inconvenience. The knee had been particularly free from pain until within eighteen months, during which time he had often observed to his friends that "he knew that ball was still in his knee, for it pained him;" and when they suggested rheumatism, he — having had rheumatic fever a year before, — would reply, "It is not that kind of a pain; it is something entirely different. I know the ball is there."

After his death his friends, having in their own minds a doubt and difference of opinion as to the extent of the injuries and in the possible lodgment of the ball in the knee, consented to a post-mortem examination of the parts.

Upon calling Dr. J. C. Warren's attention to the case, he furnished me with a copy of the account as given above, without which the authenticity of the case might be doubted, and he kindly offered to assist me in the removal of the parts. Upon examination of the left arm two irregular cicatrices were discovered, — one on the outside below the elbow, the other on the inside higher up, showing that the joint had been traversed diagonally. Motion could not be detected. As the body had been packed in ice the muscular rigidity was great. The joint was removed as for resection. Upon forcibly flexing the arm numerous

fibrous adhesions were found; some were broken down, but others were so hard and firm that they did not give way, and a portion of the coracoid process was broken away in their place. Small particles of lead, the largest the size of a millet seed, were found imbedded in the muscular tissue.

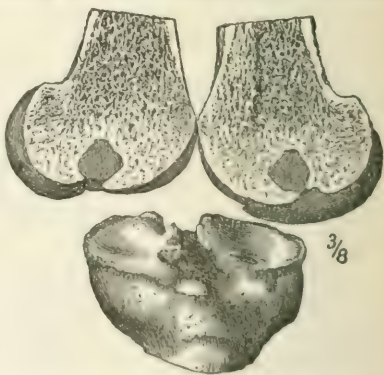
As a careful and minute description of the specimen can be found in the catalogue of the Army Medical Museum, written under the faithful supervision of the curator, I give the gross appearances only. The



condyles of the humerus were broadened, thickened, displaced, and irregular, studded with spiculæ. The olecranon showed signs of injury, and the head of the radius was thickened. Upon section, the internal condyle was found to have been broken into two pieces, the fracture extending

into the joint. The external condyle was fissured. The union was ligamentous, though from a peculiar cracking sound heard while the parts were in a vise while the section was being made, it is safe to say that there was osseous union at the outside. By far the most interesting part as revealed by the examination was the knee. An oval cicatrix as large as a dime was discovered below the external condyle of the femur and below the patella.

Upon opening the joint and removing the semilunar cartilages, there was found a "gouged" wound of the tibia at the articulation with the condyle of the femur. The tibia showed no signs of disease, only an oval piece gouged out. The external surface of the femur presented on its articular face an oval cicatrix, half an inch by three fourths of an inch, on the cartilage; the rest of the bone seemed to be normal, there being nothing of pathological interest until a longitudinal section was made. A mass of lead was found imbedded in the cancellated tissue of the condyle just beneath the cartilage, which had grown over it entirely. This mass was of good size, and nearly round. About the lead was a slight deposit of lime. The cancellated structure in the immediate neighborhood was more compact than elsewhere, but the amount of irritation it had produced was slight. From the nature of the wound



it appeared that the elbow was not only bent and against the flexed knee, but that the ball must have come from a lower plane. The ball was cleaned and its irregularities taken off by its passage through the arm, which may account somewhat for the little trouble it caused in the knee.

The specimens have been forwarded to the Army Medical Museum, and are numbered 6811, 6812, Section 1. The electro-plates which are used to show the position of the ball and the appearances of the elbow were loaned me by Dr. George A. Otis, curator of the museum, and were made for the catalogue and for the third volume of the Surgical History of the War of the Rebellion.

A CASE OF CUTANEOUS CALCULUS.

BY EDWARD J. FORSTER, M. D.

ON March 23, 1878, I removed from the face of an Irish servant girl a small, hard tumor, which on a casual examination had the appearance of a urinary calculus. It was situated about midway between the outer angle of the left eye and the tragus of the ear. When an incision was made, it was found to be imbedded in the fibrous tissue of the skin, and was easily dissected out with the handle of the scalpel.

Of its history very little could be learned; the patient thought that she first noticed it some half dozen years ago, dating its commencement from a fall. After it was first seen it continued to increase for about six months, remaining stationary ever since. The calculus is of an oval shape, weighs, after being sawed in two, .95 grammes, measures in length .16 centimetres, in breadth .12, and in thickness .08.

Prof. Edward S. Wood, who kindly made a chemical analysis, reported as follows: "It contained but little organic matter, consisted of epithelial *débris* and a little fatty matter. The bulk of the calculus was made up of phosphate of lime, but it also contained a little carbonate of lime." The tumor was probably at first atheromatous, afterwards becoming calcified.

Virehow in his work on tumors, under the head of Atheroma, says, "In the subsequent history of an atheroma it often ceases in its development, and if small then produces no further trouble. Ordinarily calcification of its epidermic cells takes place either externally, forming a sort of shell, or internally, the contents then becoming mortar-like; or the entire mass is converted into a chalky substance. There is a preparation in our collection of a scrotum studded with calcified atheromas varying in size from that of a hemp seed to that of a bean."

Duhring, in his Diseases of the Skin, says, "In connection with

milium the so-called stones of the skin, or *cutaneous calculi*, may be referred to. They are usually milia or sebaceous concretions, which have undergone metamorphosis into hard, calcareous, or stone-like masses; they are met with only rarely."

Professor Fitz, who has examined the specimen, says, "It is remarkable for the almost ivory-like character of the surface, due to the extreme density of the calcification."

The specimen, which was shown to the Boston Society of Medical Observation, has been deposited in the Warren Museum of Harvard University.

SUBPERIOSTEAL RESECTION OF A PORTION OF THE TIBIA.¹

BY E. H. BRADFORD, M. D.

M., a child twenty months old, was brought to the Children's Hospital with a sinus in the left leg, at the junction of the middle and lower thirds. The tibia was enlarged in the lower two thirds of its length. The child was quite pale, but in fair flesh. There was slight if any enlargement of the epiphyses at the wrists and ankles. The right knee was swollen and stiff, and there was a cicatrix of a healed abscess in the calf, and also at the base of one of the toes of the left foot. The child had been brought up at the breast, and is reported to have had fair health. The sinus had existed for several months, had occasioned no pain, and had appeared without known cause.

Under ether the cavity into which the sinus led was examined with a probe; a small sequestrum was removed. The bone was found to be extensively diseased throughout the whole lower epiphysis, which had become simply a bag full of carious bone retained by the periosteum and a thin layer of firm bone. The medullary canal of a greater part of the diaphysis was enlarged and filled with cheesy matter; the bone itself was soft, and honeycombed with caseous deposits. There was no pus. An incision was made through the skin and the periosteum; the latter was thickened and loosely adherent. It was readily stripped from the adherent bone. A chain saw was passed beneath the tibia, and the bone was sawn off three fourths of an inch below the junction of the upper epiphysis with the diaphysis. On lifting the bared bone from its position it broke at the lower part within three fourths of an inch from the ankle-joint, at a place where little but periosteum remained. The upper fragment was then removed; the lower portion (which consisted of the lower epiphysis) was so thoroughly disorganized that no attempt was made to remove it, and it was scraped out with a sharp-edged curette.² The periosteum and a thin layer of

¹ Read before the Boston Society for Medical Improvement.

² Sédillot's *Évidement des Os*.

bone were left, and the cartilage at the ankle-joint. The cavity was filled with balsam of Peru and oakum. A straight side-splint was applied to the outside of the leg. The wound was left open. The constitutional effect of the operation was slight. On taking off the dressing on the following day granulations could be seen budding from the inside of the periosteum. The granulations increased, and gradually filled nearly the whole cavity. The granulations from the sawn end of the tibia were most rapid in growing, those from the stripped periosteum the next, while the granulations from the epiphysis were slower.

The child did well for a month, then suffered from a light attack of measles, after which the granulations became pale and flabby, and there was little attempt at further granulation or the formation of bone. A small abscess formed below the outer malleolus on the affected limb, and later a second one at the right wrist. During the extremely hot weather of July the child failed noticeably, and died after a severe attack of diarrhœa, three months after the operation.

The mass filling the cavity caused by the removal of the bone was examined after death. Bone was found to have developed at the upper portion and in the epiphysis, and also on the outer side; from the middle of the periosteal flap on the inner side no bone had been developed.

The number of cases of subperiosteal resection of the tibia for disease is not large. I have found records of the following: (1.) Jambon and Aubert.¹ Man, twenty-one years old; removal of four inches, lower end of tibia, shaft and lower epiphysis, for suppurative osteitis. Recovery with useful limb. (2.) Holmes.² Boy, ten years old; removal of whole diaphysis. Recovery with useful limb in eight months. One and one half inches shortening. (3.) Holmes.³ Boy, seven years old; removal of a portion of the diaphysis. Amputation was subsequently performed, with recovery of the patient. (4.) Lentenneur.⁴ Patient twelve years old; suppurative periostitis; removal of whole of shaft. Recovery in seven months. (5.) Larghi.⁵ Patient twelve years old; chronic osteitis; removal of eight inches of the shaft; epiphyses left. Recovery with useful limb in four months and one half. (6.) Creus y Manso.⁶ Patient fifteen years old; removal of entire diaphysis; the epiphyses were sound. Perfect restoration in two years. (7.) Cheever.⁷ Patient thirteen years old; suppurative periostitis; removal of entire diaphysis and lower epiphysis. Recovery in eight months, with a useful limb; shortening of three fourths of an inch. (8.) Buckingham.⁸ Patient eight years old; suppurative periostitis; removal of diaphysis. Recovery with a useful

¹ Vide Ollier, *Traité de la Régénération des Os*.

² Vide *Surgical Treatment of Children's Disease*, page 391.

³ *Ibid.*, page 395. ⁴ Vide Ollier, *loc. cit.* ⁵ Vide Ollier. ⁶ Vide Ollier.

⁷ Boston City Hospital Reports, first series, page 362.

⁸ *Ibid.*

limb. (9.) Ropes.¹ Removal of diaphysis; details not given; patient recovering. (10.) Duplay.² Patient sixteen years old; removal of entire diaphysis; the epiphyses left. Recovery, with two cm. shortening. (11.) Varich.³ Patient nineteen years old; five and three eighths inches of the tibia removed. Complete recovery, with one fourth inch shortening. (12.) Fuqua.⁴ Patient sixteen years old; chronic disease of bone; eight and one half inches of the tibia removed. Recovery. Giraldés,⁵ McDougall,⁶ Newland,⁷ Moore⁸ (two cases), are reported to have done the operation successfully. Langenbeck, Neudörfer (twelve cases), Kempter,⁹ Conant,¹⁰ have performed the operation for disease following gun-shot injury and accident.

Of the cases which I have been able to collect, recovery took place in all except in the one reported by Mr. Holmes, where amputation was performed subsequently.

The death in the case here reported may be fairly attributed to the age of the child and to the effect of intercurrent disease.

The bone removed subperiosteally was two and one fourth inches long and three and one fourth inches in circumference. The portion curetted was one half inch long.

RECENT PROGRESS IN THE TREATMENT OF CHILDREN'S DISEASES.

BY D. H. HAYDEN, M. D.

*Tracheotomy in Membranous Laryngitis; the Indications for its Adoption, and some Special Points as regards its After-Treatment.*¹¹—The surgeon is often called too late, after all therapeutic measures have failed, these generally including depressants. Recession of the chest wall is a more important indication for operation than the loud clanging cough. In most urgent cases the voice and cough are all but abolished, owing to the implication of the vocal cords. Mr. Parker recommends administering chloroform previous to the operation, and has never seen any ill effects from it. The higher operation is preferred as the most

¹ Boston City Hospital Reports, first series, page 362.

² Schmidt's Jahrbuch, 1876, Bd. 171, page 66.

³ New York Medical Journal, January, 1878, page 56.

⁴ Richmond and Louisville Medical Journal, April, 1878.

⁵ Schmidt's Jahrbuch, 1875, Bd. 166, page 268.

⁶ Schmidt's Jahrbuch, 1876, Bd. 166, page 268.

⁷ Richmond and Louisville Medical Journal, April, 1878.

⁸ Ibid.

⁹ American Journal Medical Sciences, January, 1866, page 279.

¹⁰ New York Medical Journal, vol. i., page 84.

¹¹ A paper read before the Royal Medical and Chirurgical Society at a meeting held November 26, 1878. London Lancet, November 30, 1878.

easy in children, and the tracheal dilator advocated in preference to the immediate introduction of the canula; in this way the tracheal wound is kept open. As a matter of routine he also advises that the trachea and glottis be thoroughly cleared of all foreign matters, whether membrane or mucus, before the introduction of the tube. A feather is usually employed, being passed downwards towards the trachea, upwards into the larynx and through the glottis. The presence of membrane or of inspissated mucus in the larynx above the tube after tracheotomy is often an unsuspected cause of reflex irritation and cough. The surgeon ought every now and then to clear out the larynx so long as the patient is unable to do it himself. Mr. Parker advocates the largest size tube which can be got into the trachea without violence, and the shortest consistent with safety; he lays stress on the advantage of the tracheal part being freely movable. As to the curve of the tube, the outline should approximate the Gothic rather than the Roman arch; in other words, tubes should be made in the form of quarter circles. The forms usually in vogue are not recommended, for it can be shown that such tubes must almost necessarily impinge on the anterior walls of the trachea, and so produce mischief. Mr. Parker believes that a large proportion of the trouble which in past years has arisen from the use of "rigid" tubes has been caused by "ill-fitting" tubes. In speaking of Mr. Baker's flexible tubes, the reader was rather inclined to doubt the expediency of regarding them as less likely to produce ulceration than rigid ones; for unless the flexible tubes are made of a suitable curve they will most probably lead to ulceration just as certainly as (though perhaps less rapidly than) rigid ones. The great indication for operation being the presence of a mechanical impediment to respiration, so the chief object of the surgeon in after-treatment should be to prevent its recurrence. Besides the feather another important aid is the employment of steam. The amount varies in individual cases, but an excess is always to be avoided. The less the tracheal secretion, the more steam is needed, and the converse. Creasote, carbolic acid, benzoin, and other medicaments may be added to meet the requirements of various cases. "Solvents" are particularly recommended, and the most important of them is soda, ten or twenty grains to the ounce of water, to be sprayed into the throat from time to time. It is thought to soften membrane, and also to render its re-formation less possible. Mr. Parker has seldom seen cases where the death could be attributed to the operation, pneumonia and collapse being the commonest causes. The paper concludes thus: "Bearing in mind that the operation is undertaken, not as a curative measure, but simply with a view to the relief of a mechanical impediment to respiration; seeing, nevertheless, the great frequency with which, after tracheotomy, the trachea and larynx on the post-mortem table are found covered, not to say choked up, with mem-

branous exudation (specimens of which may be found in almost every anatomical museum), the author, as a practical outcome of his paper, and with the view to raise a definite issue for discussion, feels justified in enunciating the following dictum: The presence of membrane in the trachea in a fatal case of membranous laryngitis after tracheotomy must be regarded as evidence of the want of due care on the part of the surgeon in charge, just as much as would be the presence of a piece of gut in the inguinal canal after herniotomy, or of a calculus in the bladder after lithotomy."

Mr. Parker's paper gave rise to an extended discussion.

Mr. T. Smith indorsed the paper highly, and bore testimony to the energy with which, when house-surgeon to the Great Ormand Street Hospital, Mr. Parker had carried out the after-treatment of cases which he himself would have deemed hopeless. He had often seen him suck out membrane from the trachea.

Mr. Holmes said that the author's suggestions were of great value; and that now, after Mr. Parker's paper and Mr. Smith's testimony of the value of the practice, he should alter his procedure, which had previously been to abstain as much as possible from irritating the trachea. In answer to Mr. Holmes, Mr. Parker stated that he had performed tracheotomy in cases of membranous laryngitis seventeen times, with eight deaths. Mr. Holmes, resuming, said that this rate was wholly unfamiliar to surgeons, and should lead to the general adoption of the lines of practice suggested in the paper. He did not think that many surgeons used the flexible tubes; and in one case of tracheotomy for cancer of the larynx, in which the trachea was too sensitive for metal tubes, he had found that the flexible tube caused as much if not more irritation, and had to be discarded.

Dr. Charles West, the president, said that in his whole consultation practice he had never regretted a case of tracheotomy. He had often felt sorry that the operation was not sooner performed. He regarded the retraction of the soft parts the most trustworthy indication for the operation, and was accustomed in every case to expose the abdomen and chest, and, according to the degree of retraction, to draw conclusions as to the expediency of operating. He regarded Mr. Parker's statements as sound and wise.

In answer to several members who advocated strongly the flexible tubes, Mr. Parker said that he did not wish to deprecate their use, but thought that they should be tried on their own merits; and that the evils of non-fitting rigid tubes should not be taken as evidence in favor of elastic tubes, the curve of which he believed could not be altered in the trachea without causing pressure. He would rather compare the two kinds to the silver and flexible catheter, — each useful in its own way. In reply to Dr. Marsh he said that the paper was a summary of

the subject, but he did not know of any text-book where the treatment of the trachea as here laid down was emphasized. Necessity for curtailment prevented reference to Trousseau and other earlier workers in tracheotomy.

Diphtheria and Tracheotomy. — Settegast.¹ There were treated between 1873 and 1876 481 children with diphtheria, and tracheotomy was performed in seventy-eight per cent. of the cases, — 375 times. The 106 children upon whom tracheotomy was not performed are classified as follows: (1.) Mild cases of diphtheria. (2.) Cases in a moribund condition when brought to the hospital. (3.) Delicate children under two and a half years of age. (4.) Cases where there was a high degree of infection, but no stenosis of the larynx. Of these cases 46.2 per cent. recovered.

Where tracheotomy was performed nearly thirty-two per cent. recovered, and this percentage is quite a constant one; for, of the 754 children operated on between 1861 and 1876, 31.16 per cent. recovered. There was naturally a variation in different years, 1866 being the best (48.14 per cent. recoveries), and 1868 the worst (20.3 per cent. recoveries).

The greatest number of tracheotomies was in the fifth year; there was then a diminution both ways, suddenly and rapidly to the ninth year, then gradually to the fifteenth. The mortality was one hundred per cent. in the first two years of life. In the third year 23.65 per cent. recovered. From the third to the ninth year the proportion of recoveries rose by degrees forty-five per cent., the eighth year alone proving an exception, with 28.86 per cent. of recoveries. From the ninth year the prognosis became again unfavorable.

A large proportion of the cases were affected with scarlatina and albuminuria. There was seldom a complication with measles, which, however, when present, affected the prognosis unfavorably. Diphtheria of the operation wounds happened rarely, as did also hæmorrhage and purulent mediastinitis. There was often emphysema, which, however, was of no significance. Up to the eighth year the inferior operation was almost exclusively practiced. For the last two and a half years inhalations were employed after the operation, but they did not improve the mortality-rate. Removal of the canula was difficult in only two cases. One patient was still wearing the instrument; with the others it was left out after a few weeks.

*Ætiology of Spasmus Glottidis Infantum (Asthma Rhachiticum).*² —Prof. Z. Oppenheimer, Heidelberg. This disease has been generally

¹ Report of the Surgical Department of Hospital Bethanien, Berlin, 1873–1876. Langenbeck's Archiv, xxii., page 875. Centralblatt für die medicinischen Wissenschaften, November 16, 1878.

² Deutsches Archiv für klinische Medicin, June 12, 1878.

regarded as due to a spasm of the laryngeal muscles. The symptoms, however, as is well known, differ very much from those observed in adults when affected with a cramp of these muscles. The author shows the untenability of the hypothesis that the disease is the same in the two cases, and that the difference in the symptoms is due to anatomical and other peculiarities in the infant. It is universally agreed that the most constant symptom, and, in the simplest form of this disease, the only symptom, is the apnœa; and experience, as well as the large array of experiments that have been made in the study of dyspnœa, rejects such an idea as that this apnœa is the result of a mechanical impediment to the entrance of air.

Oppenheimer finds in the experiments of Rosenthal on the movements of respiration and their relation to the vagus nerve (Berlin, 1862) "facts that are able in every respect to make clear and explain the nature of this disease," and which "are entitled to be looked upon with reference to the disease in question as *experimenta ad hoc*; and scarcely could a second disease in the pathology of the nervous system be so thoroughly sought out with regard to its nature as has been the spasmus glottidis infantum by Rosenthal's experiments." These experiments, which the author reproduces quite fully in this article, have reference principally to the effects upon respiration of irritations of the superior laryngeal nerve; and the symptoms produced are shown to be quite similar to those present in the disease in question.

In place of the electrical current which Rosenthal makes use of in his experiments, the same results would be expected from a mechanical irritant in the form of pressure upon the vagus, capable of rapidly arising and as rapidly disappearing, such as, for instance, would be caused by the pressure of the finger upon the vagus in the neck. A possibility of such pressure is to be found in the foramen jugulare where the nerve and vein lie together, separated by the intrajugular ligament; but only when from some cause or other this ligament has become relaxed, and has thus ceased to exercise its protective influence over the nerve, and to prevent pressure upon it by the distended jugular vein. In one autopsy of a fatal case of this disease, Oppenheimer was able to convince himself, with the aid of the forceps, that this change had taken place, and that the ligament was longer and more relaxed than normal. The author finds in rhaehitis, which in a great majority of cases is associated with the disease in question, the cause of the changes above described in the ligament. The vagus, glosso-pharyngeal, and accessorius nerves are all situated in this bony canal; and by a minute description of their relative positions it is attempted to show that the accessorius is more protected and would be less likely to be acted upon by pressure, unless this were excessive. Whether pressure is ever exercised upon the accessorius nerve Oppenheimer does not venture to say;

but, if such be the case, it would tend to explain those puzzling cases where apnœa passes into death, without convulsions or symptoms of violent dyspnœa, through paralysis of the heart.

To fulfill the conditions necessary to carry out this theory, the question arises whether the symptoms preceding a paroxysm are those capable of inducing stagnation of blood in, and a consequent dilatation of, the internal jugular vein. The answer is to be found in the fact that the attack itself comes on during crying, laughing, drinking, a fright, some sudden impression on the senses, — in short, is ushered in by some exciting cause which disturbs the rhythm of respiration, impeding inspiration and prolonging expiration.

If the vagus contain alone centripetal fibres, or if centrifugal fibres are mixed with them, is still a question; but from a clinical stand-point we can accept it as a fact that by irritation of the vagus it is principally centripetal fibres that are put in a condition of irritation.

Spasmus glottidis infantum is therefore regarded by the author as the result of an irritation of the centripetal fibres of the vagus, the result of pressure of the dilated vein in the foramen jugulare, due to a pathological relaxation of the ligamentum intrajugulare, the result of rhachitis. On the ground of this hypothesis he proposes the name *asthma rhachiticum*.

The explanation of the general convulsions that at times make their appearance Oppenheimer seeks for also in Rosenthal's experiments. By these experiments we know that during the irritation of the vagus nerve apnœa after a time ceases, owing to the great stimulus produced upon the centre of respiration by the supervening want of oxygen, which overpowers the irritated vagus. This want of oxygen irritates also the centre of convulsions (*Krampfcentrum*) in the medulla, causing general convulsions, and if the muscles of respiration are also affected death can be the result.

(To be concluded.)

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

MAY 12, 1877. *Bright's Disease and Induction of Premature Labor.* — DR. CURTIS read the case: —

Mary D., domestic, single, twenty-two years old, entered the City Hospital February 12, 1877. Her family history was good. She had been well till three months before, when two hours after a meal she vomited blood. Since then she had had pain in the epigastrium immediately after eating, and lasting from one to two hours. In the morning she was dizzy till noon. The face and legs were œdematous; dyspnœa; abdomen enlarged; catamenia absent for six months, though previously regular; no trouble with micturition. Temperature 98.6°; pulse 72.

February 13th. The heart sounds are normal. She has frequent headaches, dimness of vision, and pain in back. The mammae are enlarged with areolar change. The uterus rises nearly to the umbilicus, and the fetal heart is heard to the right of the median line and near the pubes. The urine is normal in color, acid, specific gravity 1021, albumen 1.5 per cent., renal epithelium, granular and hyaline casts. She was ordered

R $\bar{y}$ Liq. ammoniæ acetatis	3 xxijss.
Acidi acetici	3 ss.
Ether. chlorici	3 i.
Tr. ferri chloridi	3 i. M.
	3 i., t. d.

and was discharged on February 27th, relieved.

She reentered the hospital March 6th, on the surgical side, for a sprained back, with œlema of legs, severe and constant headache, nausea, vomiting, and retention of urine. The urine was acid, specific gravity 1020, albumen three per cent., sediment of pus and blood, fine granular and hyaline casts. Marked changes of Bright's disease in retina.

She became drowsy and stupid, and the retention of urine continued.

On March 19th muscular twitchings and other signs of impending convulsions appeared, when she was transferred to the medical side to be delivered. She was dull, but answered rationally; had frequent epistaxis and vomiting. She was ordered dry cups to the loins, followed by a flaxseed poultice, the ammoniated acetate of iron as before, and bitartrate of potash, one half a drachm, freely diluted, three times daily; milk diet.

March 20th. The bladder and rectum having been emptied, the patient was etherized, and the left hand, with considerable difficulty, carried into the small vagina. The os admitted the index finger, which was gradually carried its full length into the cervix. As the latter yielded and opened out, the other fingers and finally the thumb were readily passed in up to the metacarpal articulation; beyond this the hand could not pass. The cervix had now disappeared; the inner os, thin as a knife-blade and one half an inch deep, surrounded the hand like a collar. In one hour this advance had been made. After three quarters of an hour more no further advance seemed possible, and the pressure of the vagina and os was numbing the arm. As the breech presented a knee was seized and brought down, but traction on one leg was not successful; the second was brought down, when the breech and a morbidly large belly were delivered; the arms were then disengaged, but no amount of traction could free the head from the embrace of the os. Finally the traction separated the trunk from the head; the latter was then perforated and removed by hand. It was hydrocephalic. The placenta was either adherent, or else so clasped by the uterus that it could be removed only with great difficulty; a part of its uterine face was ragged, as if it had been adherent. There was not a great deal of blood lost, but at the end of the operation the pulse flagged, and the woman was very weak. After the delivery of the head an enema of two ounces of brandy and two drachms of ergot was given. The uterus contracted well; hand pressure was kept up for an hour, when the binder was applied. Dilatation was begun at fifteen minutes before one o'clock; at quarter past three the placenta was delivered. The child was a male, weighed three and one fourth pounds, was thirteen and one half inches long; size about chest under arms eight inches, about thigh two and three fourths inches; fronto-occipital circumference nine inches. The bones of the head were very loose; the fontanelles large; abdomen very full, but not measured; legs and arms spindling; testicles not descended; finger-nails well formed, toe-nails partially.

On the morning of the 20th the temperature of the patient was 98.9°, the pulse 100. On the evening after the operation the temperature was 99.9°, the pulse 100. She was quiet, and had no pain, though somewhat anxious. Enemata of beef tea and brandy were given every two hours. At ten p. m. she was quiet, and taking food by the mouth.

March 21st. A. M. Temperature 99.4°. P. M. Temperature 100.3°; pulse 96. Slept but little during the night, but was quiet. Decubitus dorsal; abdomen tender, but has no severe pain; complains of weakness and vomiting; mind clear; no headache; lochia normal.

March 22d. A. M. Temperature 100.9°; pulse 104. Slept last night. Abdomen tender; no sharp pain; lochia offensive; vagina to be syringed every three hours with solution of carbolic acid. P. M. Temperature 102.7°; pulse 112.

March 23d. A. M. Temperature 101.2°; pulse 103. During night complained of great

pain in lower part of abdomen and in thighs. The abdomen is not distended; is soft, and somewhat tender in the right iliac region. She lies with legs extended; takes liquid food well. Urine, since the 20th, has been drawn four times by day, three times by night, as she complains if the bladder fills. P. M. Temperature 103.6°.

R $\bar{y}$ Quinæ sulphatis gr. iii.
t. d.

March 24th. Fair night. Temperature, A. M., 101.4°. P. M. 103°. Face drawn; abdomen fuller, but not very tender. Free and offensive discharge from vagina. Patient easy, excepting when she has spasmodic pain in abdomen. Urine turbid and pale, neutral, specific gravity 1016; urea normal; albumen one per cent., sediment, hyaline casts, and oil globules.

March 25th. A. M. Temperature 101.2°. P. M. 104.1°. Frequent vomiting in afternoon and night. Many discharges of scybala.

March 26th. A. M. Temperature 103°. P. M. 102°; pulse 120. Abdomen fuller, but no more painful; overaction of bowels has ceased; discharge from vagina diminished, and less offensive. Patient weaker; refuses food and wine. Respiration hurried; extremities cold; rectum to be washed out. Enemata of strong beef tea and brandy to be given every two hours. P. M. Failing fast.

March 27th. Nine A. M. Died.

March 30th. *Autopsy* by Dr. Bolles at twelve M. Small quantity of turbid fluid in peritoneum. Peritoneal surface of womb and intestines covered here and there with a thin creamy layer of recent lymph. A thick coat of lymph on liver. The uterus measured five and one half inches in length by three inches in width. It was pale and flaccid, with numerous small fibromata on its outer surface; this was also partially covered with recent lymph. The os was everted and irregular; somewhat ragged, but not more so than may be found after normal labor. The inner surface of the uterus was soft and irregular, with a grayish decomposing layer in places containing a small amount of offensive semi-fluid substance. The appearances were such as are found after labor. In the *cervix* was a small sinus containing about a drop of purulent matter. In the left broad ligament, at its junction with the uterus, was a small depot of pus and inflammatory products. The Fallopian tubes were swollen, reddened, and dilated. In the left ovary was a corpus luteum, slightly less than one half inch in diameter; not very distinctly marked, of a yellowish-buff color, thoroughly connected with the ovary. The *kidneys* weighed fourteen and one half ounces. The capsules were easily detached without tearing the renal surface; color red; tubules quite opaque; a marked yellow border at junction of the cones and the cortical portions. The cones were slightly darker than the cortex. In the right kidney were two or three yellowish, purulent, and sloughy-looking spots, not larger than rice grains, situated in the cones. The *liver* was mottled with fatty spots. The *lungs* were congested. The *spleen*, *stomach*, and *intestines* were normal. No metastatic foci were found in the spleen or lungs.

Puerperal Hysteria. — DR. W. L. RICHARDSON reported the case: —

D. T., born in Roxbury; lives in Boston. Twenty-eight years old; married. Fourth pregnancy, two resulting in still-born children, the last occurring in January, she then being seven months pregnant. She has one living child. Since January she has had no return of her catamenia. About the middle of June she was treated at the Boston Dispensary for falling of the womb. During the two weeks beginning about July 15th she flowed three or four times, the duration of each flowing being but part of a day, the amount being greater than when she was unwell.

About July 25th she began to have a dull headache, which has continued ever since.

July 27th. She began to be troubled with a weak back, swelling of the legs, slight swelling of the face, double and magnified vision. Her urine was dark, heavy, with a sediment, small in amount. She had great and frequent desire to pass water.

July 31st. Worked out all day doing washing.

August 1st. While walking on the street she became unconscious and fell, and was brought home by the police. She remained unconscious for three or four hours, and then became rational, but in a few hours the unconscious state returned; her mind became wandering, and since that time she has alternately, for several hours at a time, been unconscious and wandering and then rational, the duration of either state being longer or shorter and

more or less frequent on different days. While unconscious she wanders in speech, and has some trouble on her mind, as expressed by her words. At times she tosses herself from side to side, striking out wildly with her arms, or tries to get out of bed. She is very strong while under the influence of one of these attacks. Her complaint is of pain in her head and back, especially the former. Her hands are most of the time up to her head, and all her replies, when asked how she feels, are in relation to the pain in her head.

At times she vomits, the matter vomited being streaked with blood. She is a large and apparently a strong, healthy woman. She eats well during her rational periods, and from time to time calls the attention of the nurse to her natural wants. Her bowels are alternately constipated and loose. The above is the history of the case before her entrance to the hospital, as given by her husband.

August 28th. Entered the hospital this A. M. She was brought in a hack, and carried to the ward. After her entrance she was very quiet all day. When spoken to she would answer sleepily, and at times at random. Diet: milk and a little tea. No action of the bowels. Urine evacuated once; amount large, color normal, reaction acid. Albumen none. Specific gravity 1026. Urea normal. The microscope showed a large number of oxalate of lime crystals.

The evening visit found the pulse 70, temperature 97.8°, respiration 20. She slept well all night.

August 29th. During the day she slept but little, being very restless. She had eight convulsions during the twenty-four hours. These turns were characterized by the following symptoms: She first turned over in bed towards the wall, as she said, not to fall out; then with low cries and moans she would throw her arms about, grasping the head-board, if her hands came in contact with it, and toss around the bed, her body bent backwards (opisthotonos). She would not answer when spoken to, and seemed to be wholly unconscious. At times she would complain of her head. These convulsions lasted from ten to fifteen minutes, during which and after for some five to ten minutes longer she remained unconscious, putting her hand to her head and saying, "Oh, my head!" After regaining consciousness she would say, "I had a very bad turn." Twice she vomited about a teaspoonful of blood. Diet: milk, tea, with a little broth and bread.

Her abdomen was very large, and her bowels constipated. Half an ounce of castor oil was ordered with good result, accompanied by a large amount of wind.

She had a good night's rest until midnight, when she had several hysterical convulsions. Her temperature was, A. M. 98.2°, P. M. 98.8°; pulse A. M. 76, P. M. 72; respiration A. M. 24, P. M. 24.

August 30th. Had three convulsions before the morning visit, but was rational a part of the time. Her pulse was 76, temperature 99.2°, and respiration 28.

A careful examination of the patient while she was lying on her back showed the abdomen to be enlarged, — as if at full term, — firm, elastic, tympanitic. Through the abdominal walls the uterus could not be made out, although some resisting body — possibly small foetal parts (?) — could be felt in the left iliac region. Per vaginam the os and cervix — the latter one and a half inches long — could be felt but unsatisfactorily, owing to the nervous condition of the patient.

The patient was then etherized with the difficulty usually attending the etherization of hysterical patients.

The abdomen, which before the administration of ether had been much larger than is usual in a woman nine months pregnant (its vertical curvature commencing between the breasts and extending to the pubes, and its lateral curvature extending from the back on each side), immediately subsided to the normal size of the abdomen in a woman seven months pregnant, while its tympanitic character disappeared. Beneath the abdominal wall the uterus could be felt rising above the umbilicus about one inch, and easily movable. Per vaginam the cervix could be felt about an inch long and soft, while above it was the uterus, which by combined internal and external palpation showed the date of pregnancy to be about seven months.

There were no signs of preëxisting pregnancy in the abdomen, although there were marks of a previous mammary distention of the breasts. The fourchette and perinæum showed a previous delivery. As she came out from under the influence of the ether the abdominal

tumor commenced to increase, although it did not regain its previous size on the same day with the examination. At the evening visit the pulse was 100, temperature 98.4°, respiration 24.

After recovering from the effects of the ether she had two convulsions, and was very restless and wandering during the afternoon and evening.

August 31st. Slept but little last night, and was very restless. Appetite poor. Was ordered ten grains of chloral and twenty grains of bromide of potassium every three hours. Had two convulsions during the day. During her periods of consciousness she was more rational than before taking the ether. Slept well at night.

September 1st. Condition to-day about the same; had but one slight convulsion.

September 2d. Had only one convulsion. Her general appearance was decidedly improved. As the hospital was crowded, and the patient lacked two months of her confinement, she was sent to the City Hospital, where she could stay until return here at the time of labor. She remained there about ten days, improving daily. She then returned to work, and was confined November 22d, the labor being in every respect normal.

Phlebitis in Consequence of Periuterine Inflammation or Peritonitis. — DR. SINCLAIR stated that three cases had recently appeared under his care. In the first case, that of a lady aged twenty-nine, pelvic inflammation followed the catamenia, developing phlebitis, first on the left then on the right side, along the course of the saphenous vein. The second case was that of a lady of forty, who, under similar circumstances, was seized with phlebitis, first of the lower extremities, then of the upper, and then elsewhere, until, finally, there was a general distribution of the disease, from which there was a very slow recovery. To-day he had seen a third case following severe pelvic peritonitis, the result of wetting the feet after the catamenia four weeks ago. At one time the patient's life was threatened from the exhaustion of constant vomiting, during which she was fed by the rectum. Three weeks before pain occurred in the right calf, and the right saphena and the veins of the calf became cordy and painful. Internally there were tender portions of the roof of the vagina on the right side, and excessive tenderness high up on the right side of the uterus. Dr. Sinclair predicted for her a long and severe illness. He remarked that he did not know how common and how much observed this sequence might be, but thought it strange that he should have seen so many cases in so short a time. In the last case the pelvic symptoms came on three or four weeks before the phlebitis, which began internally, and extended down the thigh.

DR. CHADWICK stated that among fourteen hundred patients at his dispensary, and six or seven hundred at the hospital, no such sequence had been observed.

DR. HOMANS remarked that he occasionally saw phlebitis after surgical cases, as once in both lower extremities after simple fracture of the thigh. He amputated the leg of a lady who had been run over by the cars; she had phlebitis a few weeks afterwards, when the wound was nearly healed. He did not think that the cases of Dr. Sinclair showed a special liability to the sequence. He had seen the disease in one or both legs several times in typhoid fever cases; as often, in fact, when there had been no pelvic inflammation as when there had been.

Double Uterus and Vagina. — DR. CHADWICK reported the case, which was published elsewhere.

Labor complicated by Fibrous Tumors of the Cervix Uteri.—DR. HOMANS stated that he had again (within a week) delivered the patient whose case he had from labor to labor reported at previous meetings of the society. This was the fifth delivery. The original tumor of the posterior lip had grown considerably; it was about an inch and a half from the edge of the lip, and filled the hollow of the sacrum, where it lay apparently not adherent, though immovable, so that the finger could not even be passed behind it. The tumor of the anterior lip was smaller than before. The head presented. The long French forceps were applied, and strong traction made. A living child was delivered, which bore upon its head marks of the forceps, such as indicated that a good deal of force had been used. The delivery occurred at full term, fifteen months from the previous labor. The posterior tumor was as big as the fist, round and smooth, and did not change its position during the passage of the child. The child's head was small.

Fibroid Tumor in the Os Uteri obstructing the Menstrual Flow.—DR. LYMAN reported the case of a lady twenty-two years of age, tortured almost to insanity by the monthly pain of menstruation. On examination he found a curious stoppage of the os in the shape of a small tumor, partially external, which fitted the cervix like an acorn in its cup. Externally it was soft and vascular, and bled on the slightest touch. The attachment occupied nearly the whole of the circumference of the cavity of the cervix, and only admitted posteriorly a sharp-angled silver-wire probe, which after insertion had no lateral movement. The larger portion of it was excised, and was found to be superiorly as hard and firm as any ordinary fibroid.

Imperforate Os complicating Labor.—DR. TOWNSEND, of Natick, reported the case of an Irish patient in labor at term, to whom he was called in consultation. No os was found at the primary examination, but a slight depression existed at the normal site. The patient had had some uterine disease in the early stage of pregnancy, and had been treated severely by caustics. By the speculum a star-like cicatrix was seen. This was, without great difficulty, broken through by the finger-nail without instrumental aid, the cicatrix being scarcely firmer than the ordinary membranes often are, when the os immediately took the usual form in dilatation, about an inch in diameter, and the labor then went on normally. Some years ago, said Dr. Townsend, Dr. D. H. Storer was called to a similar case, which occurred in Framingham.

DR. LYMAN said that he had heard a good deal concerning the cicatricial contraction of the os from the use of caustics, but that he had never had, himself, any bad results from their employment.

DR. RICHARDSON remarked that among the out-patients of the Massachusetts General Hospital he had met with several bad cases of cicatrization from the use of caustics. In one instance the entire outline of the os and cervix was lost; in the upper part of the vagina was found a passage to the os, which admitted only the very finest bougie. The patient had been under the care of female physicians, who had applied caustic at frequent intervals for a year and a half.

DR. SINCLAIR reported two instances which he had met with in non-pregnant women. One was a case of atresia from the use of caustics. The other

case was his own patient, who was treated for uterine disease, and who, after a year or two, came to him complaining of great pain at the occurrence of the catamenia. He found the os closed and the lips adherent. The removal of the adhesions relieved the pain entirely. The treatment she had received had never in his hands been followed by similar results in other cases.

Relaxation of the Symphysis Pubis as a Result of Parturition.—DR. DRIVER, of Cambridge, reported four cases, which will be published. He stated that among the very old writers relaxation was considered to take place regularly as a preparation for delivery. That belief had disappeared, except with regard to some of the lower animals, and some feeble persons. He doubted its being a physiological fact taking place in every way normally. He remarked that the case he had first reported was interesting to him, the previous retroversion having been supposed to be the cause of the symptoms, whereas these were probably due to the condition of the symphysis. He suggested that the length of the first stage was the chief difficulty with late primiparæ.

DR. CURTIS recalled cases of marked separation of the bones in guinea pigs which were exhibited by Dr. Jackson at the meeting of the Boston Society for Medical Improvement.

DR. HOMANS stated that he had never seen but one case. In this instance the bones for two or three months after each confinement would occasionally slip while the patient was walking, so that even if she were standing in the street before a coming carriage she would be unable to get out of the way.

DR. SINCLAIR said that he had never met with a case which he had been able to recognize as such. As to the statement, which had been made elsewhere that separation does not take place, he was far from thinking so. He was reminded of a lecture by Simpson, who enumerated animals which habitually had this condition.

DR. RICHARDSON remarked that he supposed it to be well admitted that a physiological relaxation of the pelvic bones of women occurred in the latter stages of pregnancy.

DR. LYMAN mentioned an instance of this affection which occurred twenty-five years ago. The patient had had twins, and the relaxation was so marked that the pelvic bones could be moved freely and largely upon each other in both a vertical and a lateral direction. Her locomotion was seriously affected, especially the going up and down stairs. The affection in this patient was complicated with considerable œdema, which in the morning occupied the neck and chest, in the evening the lower parts of the body. Dr. Lyman remarked that opinion upon this question had, of late years, undergone great change, the majority of the best writers of the present day believing relaxation to occur in *some degree* in all cases of labor.

DR. INGALLS stated that he had never met with but one instance of relaxation of the symphysis. In this case there was trouble for one or two months, the patient being unable to walk about with comfort, and complaining of the pelvis. A leather belt gave her a great deal of comfort. In the cases exhibited by Dr. Jackson, of rats and mice, in which the bones had been separated to a considerable extent, the interval was supplied with strong ligamentous substance. Dr. Ingalls said he had no doubt that very many animals do have this separation.

DR. HOSMER said that he had had a single case under his observation. He heard the friction sound and felt the motion of the loose bones, but there was no pain nor serious disability. Assuming the relaxation to be physiological, said Dr. Hosmer, may it not have to do with the difficulty of the labors of primiparæ of advanced age?

DR. LYMAN stated it as his belief that it did not.

DR. RICHARDSON asked if the second stage of labor in late primiparæ was not longer than the same stage in young primiparæ.

DR. HODGDON said he had always found greater resistance of the perinæum among first labors at an advanced age.

DR. INGALLS stated as the result of his experience that first labors of patients between the ages of thirty and forty were not really different, whether in regard to severity or duration, from those of women between the ages of twenty and thirty. Taking a considerable number of the former class, he would not expect to have greater difficulty with these than with the same number of younger parturients.

Novel Method of surmounting the Difficulties of Labor. — DR. INGALLS said that on entering the lying-in room, once upon a time, in an obscure village, he was taken quite aback by a startling group: the parturient lying upon her side, and a large woman seated upon her pelvis.

DR. JOHN B. BIDDLE.

PROFESSOR OF THERAPEUTICS AND MATERIA MEDICA AT THE JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.

HALL OF JEFFERSON MEDICAL COLLEGE, PHILADELPHIA, January 20, 1879.

At a meeting of the faculty, held this day, the death of Dr. John B. Biddle, professor of therapeutics and materia medica, and dean of the faculty, was announced; whereupon the following was ordered to be entered upon the minutes of the faculty:—

“The faculty of Jefferson Medical College find themselves plunged into the deepest sorrow by the death of their fellow-member, Dr. John B. Biddle, professor of therapeutics and materia medica, and dean of their body, which occurred on the evening of the 19th inst. As a friend, they feel sadly the void thus created, and mourn over the departure of a greatly loved companion. Endeared to them by his noble qualities of head and heart as their colleague and executive officer, they realize the irreparable loss of a sound and sagacious thinker, an able and successful teacher, and a faithful, experienced, and judicious executive, whose untiring zeal and earnest labors in his own department, and for the school at large, have contributed so much to maintain the usefulness and advance the reputation of Jefferson Medical College.

“The faculty feel that words are inadequate to express their sense of this bereavement, but desire to make record of the estimate in which they held the deceased, whose memory they will ever cherish with sincerest affection.

“They desire to convey to his sorrow-stricken family their warmest sympathy, trusting that in the knowledge they have of the esteem in which he was held in the community, and the love which was borne him by all his co-laborers and friends, and that he has left them in the assurance of a Christian faith for that larger life which is eternal, they find comfort and consolation.

“Resolved, That a copy of this testimonial be transmitted to the family of Dr. Biddle, and also to the honorable board of trustees; and that the faculty will attend his funeral in a body.

(Signed)

ELLERSLIE WALLACE, Dean.

As will be seen from the foregoing resolutions of respect and condolence, Professor John Barclay Biddle, dean of Jefferson Medical College and president of the Association of American Medical Colleges, died on the 19th of January, 1879. He had been suffering from a typhoid condition, complicating an attack of pleurisy, for about a fortnight, but was not considered as dangerously ill until the day before he died. The announcement of his death was a shock to the profession, and a severe loss to the community, by whom he was universally respected and esteemed. He occupied a prominent position in social circles, and held some important trusts. He was president of the directors of the County Prison, attending physician to the Girard College and to the Institution for the Deaf and Dumb, and consulting physician to a number of local charitable institutions.

Professor Biddle was born in Philadelphia in 1815, and was educated at the University of Pennsylvania, from which he received his diploma in March, 1836. After spending several years in Paris, he returned to his native city, and at once took an active interest and a prominent position in professional matters. His *clientèle* was select but never extensive, as he preferred a consulting to a private practice. He was professor of materia medica in the Franklin Medical College, and afterwards in the Pennsylvania Medical College, both of Philadelphia. Upon the death of Dr. T. D. Mitchell, professor of materia medica and therapeutics at Jefferson College, Dr. Biddle was elected in the fall of 1865 to the position, which he occupied up to the present time. Dr. Biddle was one of the editors of *The Medical Examiner*, a bi-weekly, afterwards a monthly journal, published in Philadelphia from the year 1838 to 1844, then merged into the *North American Medico-Chirurgical Review*. He had not, of late years, been a frequent contributor to medical literature. His work on Therapeutics and Materia Medica, designed as a class-book for students, was well received by the profession, and has now reached its eighth edition.

THE EDUCATIONAL MOVEMENT IN PHILADELPHIA.

AT the last meeting of the state society great interest was shown in the question of raising the standard of medical education, and several significant resolutions were adopted. The first one made it incumbent upon the county societies to elect three members to be called medical examiners, "whose duty it shall be to examine all applicants for admission as students of medicine under the tuition of members of this society; and said committee shall withhold their certificate from any applicant unless he is of good moral character, and possesses a good English education and a sufficient knowledge of Greek and Latin to enable him to pursue his studies with advantage. And no member of any county society shall receive any person as a student of medicine unless he present a favorable certificate from this committee."

Other resolutions were adopted, requiring students to enter into a written contract with their preceptor to pursue their studies for not less than three years; and, finally, it was made "the duty of all members of the profession owing allegiance to the Medical Society of the State of Pennsylvania to recommend their students to attend only such medical colleges as rigidly enforce

the full three years' course of study in their curriculum, and otherwise conduce to raise the standard of graduation."

Whilst an endeavor is being made to increase the value (and expense) of the degree, on the other hand, the emoluments and rewards appear to be steadily declining. This is due to several causes: there is, first, the reaction from the exorbitant estimates placed upon their services by physicians, which in flourishing times passed without complaint, but which are now criticised, and often opposed; and, secondly, the unrestrained competition of the public dispensaries encourages patients of every degree to enjoy the material advantages they freely offer.

ILLINOIS STATE EXAMINATIONS.

WE have received from the Illinois State Board of Health a list of the examination papers offered at its annual examination, held in Springfield January 16th. The board was organized in July, 1877, and in addition to its other functions exercises that of a licensing body. Its career will therefore be watched by other States with considerable interest. The papers before us give evidence of the thorough character of its work. We find here examinations in anatomy, surgery, materia medica, and therapeutics; hygiene, medical jurisprudence, practical medicine, physiology, diseases of women, general pathology, obstetrics, and chemistry. All physicians residing in the State who had practiced less than ten years, or who could not furnish evidence of good professional standing, were subjected to the examination of the board at the time the new law went into operation. The papers are elaborate, and demand a high standard of excellence from the candidate. Midwives were also obliged to undergo an appropriate examination. The statistics of licenses hitherto issued by the board, which we believe are of several grades, bring out some interesting facts in regard to the different so called schools of medicine. The total number of licenses issued in the State is 4950. This number is divided up as follows: regulars 3646; homœopaths 437; eclectics 456; physio-medicals 37; not stated 336; all others 38. The expenses of the board have been about \$8000 thus far. A glance at the figures here given show a very striking disproportion between the number of regular practitioners and the "pathies." Evidently the demands of a general high standard of education to all who wish to be doctors are discouraging to irregular modes of practice. We should be glad to see some form of license law established in this State, where quacks thrive as they do nowhere else. Should they succeed, as we understand they are attempting to do, in abolishing the law in Illinois, we may possibly be partially relieved from the present pressure.

MEDICAL NOTES.

—In his inaugural address Mayor Prince strongly recommended the placing of the city registrar's department under the Board of Health. The change is one that should long ago have been made. Recently a circular has been sent to the physicians of the city by one of the leading undertakers, asking for signatures to a petition in favor of the proposed change. It is to be hoped that

the members of the profession will reply favorably to the application, in order that there may be no unnecessary delay in consolidating the two offices.

— In its edition for January 8th the *Medical Press and Circular*, having entered upon its *forty-first* year, congratulates itself upon being, with the exception of the *Lancet*, “the oldest medical journal now published in the English language.” The fact is, it is more than a decade younger than the Boston Medical and Surgical Journal, which was ushered into being February 19, 1828, while the *American Journal of the Medical Sciences* is now in its forty-eighth year, and consequently older even than the *Lancet* by three years.

— The *Doctor*, a bright, English medical journal, has been discontinued.

— The *British Medical Journal* and the *Medical Times* have begun the year with cut leaves. The *Medical Press and Circular* has had the good sense thus to consult the convenience of its readers for several years, and we wish every periodical in existence would follow suit.

— In the *Lancet* Dr. Gowers recommends the following solution for the necessary dilution of blood when one wishes to count the corpuscles: “Sulphate of soda one hundred and four grains, acetic acid one drachm, distilled water four ounces.” Dr. Gowers has found it superior to any other solution.

— In Professor Simpson’s very interesting paper on the Gleanings from a Continental Tour, published in the *Edinburgh Monthly* for January, he congratulates the profession of Great Britain upon the good society work of their country, and believes that the quality of medical teachers is improved by the broadening and instructive effect of society discussion. He adds: “The want of similar societies among the Germans is a serious defect in their system of medical education. We look in vain through their calendars for the name of one where medical topics are likely to be discussed. Only in connection with one university do we find mention of such a society. When I asked one of the professors what was the nature of this *Cœtus Anatomicus*, as it is designated, he said he had not heard anything of it, but added, “Probably there is more ‘supper’ than ‘anatomy’ about it.”

— Referring to “forcible fractures” of bones for osseous ankylosis, Mr. Bryant lately stated, at Guy’s Hospital, that he had seen three cases so treated, “one of whom escaped only by the skin of his teeth, the other two dying of acute abscess of the joint.” In such cases he preferred Adams’s operation of subcutaneous osteotomy.

— Professor Penrose recommends vinegar in post-partum hæmorrhage for the following reasons: (1.) It can be easily obtained. (2.) It can be easily applied, and instantly, without special apparatus. (3.) It always cures the hæmorrhage, or rather it has not failed in his practice. (4.) It is sufficiently irritating to excite the most sluggish uterus to contraction, and yet not so irritating as to be subsequently injurious. (5.) It is an admirable antiseptic. (6.) It acts upon the lining membrane of the uterus as an astringent. The remedy is applied as follows: saturate a rag with vinegar, carry it into the cavity of the uterus, and squeeze it.

— Dr. Murchison says: (1.) The duration of the incubation stage (of scarlatina) may be only a few hours. (2.) Probably in a large proportion of cases it does not exceed forty-eight hours. (3.) It very rarely exceeds seven

days. (4.) Consequently, a person who has been exposed to scarlet fever, and does not sicken after a week's quarantine, may be pronounced safe. He thinks, too, that facts prove the infecting power of scarlet fever from its earliest stage, although probably it is less during the first two or three days than a case of measles. On the contrary its power of infection may extend over a period of many weeks. To pronounce a patient out of danger at the end of a month, after the apparent cessation of desquamation, is not always safe. He considers it a good rule to consider no case safe until after the eighth week.

— In the case of a lady who had taken huge doses of morphia daily for seven years, her child was active and lively in the womb, and is and always has been perfectly strong and healthy. The *Lancet* reports the case. The morphia was suddenly discontinued with interesting results, which will be found in a December number of the *Lancet*.

CHICAGO.

— Prof. E. L. Holmes presented to the meeting of the West Chicago Medical Society of January 13th a specimen of tuberculous choroid. The specimen was taken from a case dying at the County Hospital, in which there was a deposit of miliary tubercles in nearly every organ of the body. It came into Dr. Holmes's hands from the pathologist of the hospital, Dr. Fanger, who Dr. Holmes declared was the first physician in the Northwest who had examined the choroid for tubercles, "for the purpose of verifying the clinical fact that the choroid is often implicated in acute miliary tuberculosis."

The tubercles in this case were eight in number, and were all located in the posterior half of the eye. This was the usual location. He remarked that the choroid was a favorite site for the deposit of tubercles. As they were usually located posteriorly in the eye, and reached a size often of more than a line in diameter, they could be detected by the ophthalmoscope during life, and when in any case they were found here the presumption would be strong that they existed elsewhere in the body, and especially in the meninges. It was a curious circumstance that no one had reported the detection of any aberration of vision in cases of this kind. Theoretically, disturbance of vision should be expected in such cases. He thought more careful observations ought to be made on this point.

LETTER FROM VIENNA.

Chrysarobin and Pyrogallic Acid in some Forms of Skin Disease.

THESE substances, of analogous chemical composition and action, have attracted much notice during the past year, because of their efficacy against psoriasis and several other diseases of the skin; and a short account of the results ensuing from the use of these remedies in Vienna practice may perhaps be of interest.

Chrysarobin is obtained from Goa powder, and was introduced to the profession by Mr. Squire, of London, under the name of chrysophanic acid; Liebermann, of Berlin, however, has shown that chrysophanic acid and the derivative of Goa powder, although allied, are not identical substances, and he has called

the latter chrysarobin. Therapeutically the best results from the use of this drug have been gained with an ointment consisting of chrysarobin five, ten, or even twenty parts, and unguentum emolliens, or vaseline, one hundred parts, the proportions being varied in each particular case, according to the obstinacy of the disease or the sensitiveness of the skin. With regard to psoriasis, the advantages of this ointment are that it has no odor, and when brought in contact with a wounded surface does not cause pain, that several *plaques* disappear within a few days, and that, as a rule, the treatment is speedy and efficacious; of course, a radical cure is not obtained, for the disease recurs, as it will after the use of any remedy. Most suitable for treatment with this ointment are those cases of psoriasis in which the plaques are few in number, or are, at all events, isolated, of long duration, and have but little tendency to increase in size. The diseased spots must be vigorously washed with soap and water to remove the thick layer of epidermis, or, if very abundant, it may be scraped away with the sharp spoon; then, with the tip of a small, stiff brush the salve is rubbed into the various plaques until it leaves a yellow color. Too much salve should not be applied, as it strongly irritates the neighboring skin, over which it is certain to become diffused. Only one application, or at most two, daily are necessary. The plaques should now be powdered or covered with cloth, as chrysarobin stains everything with which it comes in contact. After from six days to three weeks, according to the size and character of the plaques, the local appearances of the disease have vanished, each plaque being covered with a smooth epidermis, but containing little or no pigment, and therefore much whiter than the surrounding skin, a condition which remains for a long time. In simplicity of application and rapidity of action this remedy surpasses everything hitherto used. Unfortunately, however, there are peculiar drawbacks attending the use of chrysarobin. When it has been brought in contact with the epidermis of the healthy skin, or with the nails, it gives a violet-brown color, especially noticeable after the use of soap. When it has been applied to the face or scalp the hair takes on a yellowish or dirty-greenish tint. Then chrysarobin is very prone to excite inflammation. In nearly every case, after from four to fifteen applications, the psoriatic plaque is surrounded by a bright red halo, just at the time the plaque itself begins to fade. On the appearance of this erythema the salve should be discontinued, when the inflammatory process will probably cease, and wholly disappear after a slight desquamation of the epidermis. Very often, however, the inflammation spreads; the erythema passes into a diffuse dermatitis, attended with pain, intolerable itching, fever, and enlargement of the glands. In some cases there appear around the mouths of the follicles countless nodules of a brownish-red color, slightly elevated above the surface of the skin, and often surmounted by a vesicle or pustule; finally, furuncles may be formed in great number. The face and genitals are peculiarly susceptible to the irritant action of chrysarobin, œdema and inflammation occurring whenever the salve is applied to these regions.

To recapitulate: (1.) Isolated plaques on the body and extremities are better suited for the use of chrysarobin than all other forms of psoriasis. (2.) Psoriasis of the face or genitals should never be treated with chrysarobin, and

the same may perhaps be said of psoriasis punctata, where the process is acute. (3.) As it is a remedy liable to give rise to most unpleasant symptoms, chrysarobin should be applied only under the personal supervision of the physician.

As pyrogallic acid is chemically allied to chrysarobin, Dr. Jarisch, assistant in Hebra's wards, instituted a series of experiments to ascertain whether these substances worked analogously in their action upon the skin. The results attending these experiments have been more than satisfactory. Dr. Jarisch makes use of an ointment containing ten parts of pyrogallic acid and ninety parts of unguentum emolliens. For psoriasis this salve is applied twice daily in the same manner as described for chrysarobin. It has an objectionable feature in that it stains the epidermis brown wherever applied, and this discoloration remains during several weeks. The duration of treatment varies from ten days to three weeks or more, somewhat longer than with chrysarobin, but decidedly shorter than with the older methods. The advantages of pyrogallic acid may be summed up as follows: (1.) When applied to the scalp the hair is unchanged, or the color is only slightly darkened. (2.) It never causes inflammation around the psoriatic plaques to which it is applied, and therefore may be used upon the face without fear of œdema and conjunctivitis. (3.) Since the salve does not irritate the skin *in toto*, as chrysarobin does, it is a remedy which can be trusted to the patient's own hand.

Pyrogallic acid has also been successfully experimented with in cases of lupus vulgaris. A salve containing ten per cent. of the acid is spread on cloth, closely applied to the diseased part, and renewed twice during the day. The lupus nodules soon take on a brownish-gray color, become œdematous, and project somewhat above the level of the surrounding skin. After from five to six applications, that is, after two or three days, the spots of lupus are totally necrosed and fall out, and the salve may be discontinued. The bridges of healthy skin between the nodules have in the mean time become superficially cauterized, are reddened, swollen, and sensitive, and the epidermis is loosened. After removal of the acid the swelling subsides, the defects in the skin left by removal of the lupus nodules heal by granulation, the epidermis is renewed, and in no place has healthy tissue been destroyed; only wherever a lupus nodule has existed there remains a corresponding cicatrix. The action of the salve is entirely local and confined to the surface with which it comes in contact. During the first two days of treatment many patients complain of pain, but no method for curing lupus is free from this drawback. Pyrogallic acid alone destroys each spot of infiltration, leaves intervening healthy tissue intact, and causes inflammation only where it is applied. Thus far the results have been very gratifying, and I need only mention that of twenty-four cases of lupus, many of which had been for a long time in the wards, nineteen were, after a few weeks' treatment with pyrogallic acid, so far relieved that they were discharged from the hospital.

Several cases of epithelial carcinoma, under continued application of a twenty per cent. pyrogallic acid salve, have been cured, the new growth becoming necrosed in a few days. The epithelial cell, however, opposes more than ordinary resistance to the action of the acid, and it is doubtful if other

than very superficial forms of epithelioma can be thus treated with success. The action of pyrogallie acid on other cell infiltrations, such as lupus erythematosus, prominent cicatrices abounding in young connective tissue, ulcerating gummata, etc., has been favorable enough to warrant further experiments in this direction.

J. E. GARLAND, M. D.

VIENNA, November 20, 1878.

SHORT COMMUNICATIONS.

JAMES WATSON ROBBINS.

DIED, in Uxbridge, January 10, 1879, James Watson Robbins, M. D. By the death of Dr. Robbins, the general public, as well as a large circle of more intimate friends, have suffered a loss which cannot readily be repaired. As a "beloved physician" he enjoyed to the end of life the deep-seated regard and affection of all those among whom his professional services were dispensed. His affability and kindness of manner at the bedside of the sick, as well as his skill in the treatment of disease, will be missed in many households. In his intercourse with his professional brethren Dr. Robbins always sustained the character of an upright, honorable, and conscientious man.

Dr. Robbins was born in Colebrook, Ct., November 18, 1801, and was the eldest of Ammi Ruhama and Salome R. Robbins. He fitted for college with Rev. Ralph Emerson, of Norfolk, Ct., and entered Yale College in September, 1818. Upon his graduation, in 1822, he taught school for four months in the town of Enfield, Ct. From this place he was engaged at Pamunkey Creek, Prince Charles's County, Md., as a teacher in the family of William L. Brent, then a member of Congress from Louisiana. Removing with Mr. Brent to Georgetown, D. C., he spent the year 1824 in his family. In 1825 and 1826 he had a school in the family of Dr. Chandler Peyton, at Gordonsdale, Fauquier County, Va. Among his pupils was Robert E. Lee, late commander of the rebel armies. Under the doctor's tuition Lee was fitted for an entrance into the United States Military Academy at West Point.

While in college Dr. Robbins acquired a love for the study of botany, and through all his future life continued a devotee to his favorite pursuit.

His medical studies were pursued under the direction of Professor Ives, of Yale College, and he was admitted to the degree of M. D. in 1828. About this time the United States government contemplated an exploration of the Shetland Islands, then recently discovered in the Pacific, and, had not the organization of the expedition failed, upon the recommendation of Professors Tully and Ives, Dr. Robbins would have been appointed its botanist.

In 1829 he made an extended tour through the New England States, examining and collecting specimens of their flora. The expense of this expedition was defrayed by William Oates, of Ipswich, and for his time and labor Dr. Robbins was to retain one half of the specimens collected. When it is understood that most of this journey was made on foot it will indicate the zeal and assiduity with which Dr. Robbins continued to prosecute his favorite study.

He came to Uxbridge in 1830, and entered into a copartnership with the late Dr. George Willard in the practice of medicine. This partnership was not of long duration, and from its close to 1859 he continued his residence at Uxbridge, neglecting no opportunity to make additions to his already large and valuable herbarium.

In that year he was engaged as physician and surgeon at the Pewabic Copper Mines, on the shore of Lake Superior. The opportunity it would afford him to study the plants of a more northern latitude was, without doubt, an additional reason for his acceptance of this position. After four years of service at the mines he started on an extended tour of observation for the purpose of enlarging the boundaries of his favorite science. Passing through Michigan and Illinois, he took passage for New Orleans in one of the first boats for that city after the Mississippi had been reclaimed from rebel occupation. After a short stay at New Orleans he took passage for Cuba, by the way of Texas, and arrived there in February, 1864. Three months were spent in the neighborhoods of Havana and Matanzas in the examination and collection of botanical specimens. Returning to Uxbridge, Dr. Robbins resumed the practice of medicine, in which he continued to the close of life. But

for his modesty and reticence he would long since have held a more generally acknowledged distinction among the masters of that branch of natural history to which he devoted his life. The extensive correspondence which he held with the leading botanists of this country, as well as those of Europe, furnishes abundant testimony of the regard in which he was held as an intelligent and reliable *confièrè*. It is understood that Dr. Robbins rendered valuable service to Professor Gray in his botanical researches, especially in the genus *Potamogeton*; and in recognition of his aid one of the species first described by Dr. Robbins is named *Potamogeton Robbinsii*. The plants collected by the government exploration of the fortieth parallel were submitted to him for their classification and arrangement. At the time of his decease he was engaged in the examination of a large collection of the flora of California.

M.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

At the January quarterly meeting, being its thirtieth annual session, the society again unanimously reëlected Dr. Henry H. Smith as its president, a deserved tribute to an efficient and experienced chief officer, who now enters upon his third term of service. The other officers of the society for 1879 are as follows: Vice-Presidents, Drs. R. Burns and J. H. Packard; Treasurer, Dr. W. M. Welch; Corresponding Secretary, Dr. W. Goodell; Recording Secretary, Dr. C. B. Nancrede; Assistant Recording Secretary, Dr. J. D. Nash; Reporting Secretary, Dr. F. Woodbury; Librarian, Dr. M. O'Hara; Censor, H. St. Clair Ash. The following were chosen to represent the society as delegates to the American Medical Association: H. St. Clair Ash, Robert Burns, John B. Biddle, W. R. D. Blackwood, Thomas M. Drysdale, L. A. Duhring, Albert Fricke, Samuel D. Gross, William Goodell, N. L. Hatfield, Charles K. Mills, James H. Hutchinson, R. J. Levis, Benjamin Lee, Henry Leaman, Andrew Nebinger, Michael O'Hara, William H. Pancoast, William Pepper, John H. Packard, H. H. Smith, George Strawbridge, Samuel N. Troth, George B. Wood, Horatio C. Wood, Jr. To the Medical Society of the State of Pennsylvania: Samuel Ashhurst, Harrison Allen, W. L. Atlee, Jr., Harry F. Baxter, F. J. Buck, Wilson Buckby, W. H. Baker, Edward T. Bruen, William H. Bennett, J. H. W. Chestnut, J. Solis Cohen, R. A. Cleemann, W. R. Cruice, Robert B. Cruice, R. J. Dunglison, Horace Y. Evans, H. Lenox Hodge, N. Hatfield, George Hamilton, L. B. Hall, William Hunt, Charles T. Hunter, F. P. Henry, S. R. Knight, Philip Leidy, J. Aitken Meigs, John A. McArthur, Caleb W. Hornor, George R. Morehouse, Edward J. Nolan, Charles B. Nancrede, H. W. Ozias, W. H. Parish, J. R. Partenheimer, S. D. Risley, John B. Roberts, John G. Stetler, E. I. Santee, F. G. Smyth, J. D. Schoales, E. O. Shakespeare, J. V. Shoemaker, A. H. Smith, Laurence Turnbull, William T. Taylor, James Tyson, William M. Welch, Charles F. Wittig, John E. Whiteside, Frank Woodbury.

The County Medical Society is now in a flourishing condition; its meetings are well attended, and the discussions spirited and interesting. It has now about two hundred and fifty active members, among which may be noticed the names of nearly all the prominent men of the profession in Philadelphia.

THE ST. LOUIS JOURNALS.

A CORRECTION.

WE have received several exceptions taken by physicians of St. Louis to remarks made by a correspondent in a recent letter from that city in reference to the *St. Louis Medical and Surgical Journal*. This journal is one of the oldest in the country, being now in its thirty-sixth year, and has always been ably edited. We therefore are happy to quote the following extract from a communication since received from our correspondent:—

"In a letter from St. Louis, published in your issue of January 9, 1879, your correspondent made the following statement: 'Long since dissatisfied with our local medical press, the representative men of the city and State have associated themselves, with an abundant capital, for the purpose of establishing a monthly periodical,' etc. It has been suggested to the writer that this assertion was rather too comprehensive in character. As your corre-

spondent has no desire to prejudice any one's interests, he wishes to modify his statement by inserting the word *many* in the sentence above, so that it will read *many* 'representative men,' instead of 'the representative men.' Otherwise the facts remain unaltered."

The old journal has evidently still many warm friends. We take this opportunity, however, to call attention to the new journal, the *St. Louis Courier of Medicine and Collateral Sciences*. It is a monthly periodical bound in neat covers, with a fine vignette of John Hunter figuring above the table of contents. The contributions are of the most varied character, containing a large number of original articles, translations, book reviews, society reports, editorials, etc. It is one of the most stylish journals in appearance that we have on our exchange list. Our Missouri colleagues are evidently of a literary turn of mind.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 18, 1879.

Cities.	Popula- tion. ¹	Reported Deaths in each.	Annual Death-Rate, per 1000 during the Week.	Percentage of total Deaths from					
				The Princip- al "Zymo- tic" Diseases.	Pneumo- nia.	Diphtheria and Croup.	Scarlet Fe- ver.	Diarrhoeal Diseases.	
New York.....	1,085,000	622	30.34	20.25	12.97	4.43	10.75	0.79	
Philadelphia.....	—	361	—	—	10.25	3.52	1.66	—	
Brooklyn.....	564,400	246	22.62	21.55	12.20	6.91	8.13	0.41	
St. Louis.....	—	120	—	13.53	12.60	6.67	—	0.83	
Chicago.....	—	161	—	21.74	9.32	13.06	3.73	—	
Baltimore.....	365,000	163	23.28	12.30	14.72	4.30	2.45	—	
Boston.....	356,500	157	22.97	21.02	12.74	16.56	2.55	—	
Cincinnati.....	—	125	—	34.49	7.20	12.59	19.20	1.60	
District of Columbia.....	—	71	—	12.63	15.43	5.63	1.41	2.82	
Pittsburgh.....	—	51	—	17.65	9.80	9.80	1.96	—	
Milwaukee.....	—	33	—	30.30	9.09	27.27	—	3.03	
Providence.....	101,000	49	25.25	26.53	8.16	12.24	10.20	—	
New Haven.....	—	31	—	12.84	9.68	12.90	—	—	
Charleston.....	—	35	—	20.00	5.71	8.57	—	—	
Worcester.....	52,500	19	18.87	31.58	15.79	15.79	—	—	
Cambridge.....	51,400	23	23.32	21.74	13.04	8.69	8.69	—	
Fall River.....	48,500	29	31.18	20.69	3.45	3.45	10.34	—	
Lawrence.....	38,200	17	23.21	11.76	23.53	11.76	—	—	
Lynn.....	34,000	17	26.08	17.65	17.65	11.76	—	—	
Springfield.....	31,500	13	21.52	7.69	7.69	7.69	—	—	
New Bedford.....	27,000	—	—	—	—	—	—	—	
Salem.....	26,400	6	11.85	—	33.33	—	—	—	
Somerville.....	23,350	7	15.63	71.43	—	57.14	14.28	—	
Chelsea.....	20,800	5	12.54	—	40.00	40.00	—	—	
Taunton.....	20,200	9	23.23	44.44	22.22	22.22	11.11	—	
Holyoke.....	18,200	10	28.65	40.00	—	—	—	—	
Gloucester.....	17,100	8	24.39	12.60	25.00	—	—	—	
Newton.....	17,100	9	27.44	—	22.22	—	—	—	
Haverhill.....	15,300	7	23.86	42.86	28.57	42.86	—	—	
Newburyport.....	13,500	10	38.62	—	50.00	—	—	—	
Fitchburg.....	12,500	6	25.03	—	—	—	—	—	

¹ Estimated for July, 1879.

Two thousand four hundred and thirty deaths were reported; 332 from consumption, 290 from pneumonia, 151 from diphtheria, 146 from scarlet fever, 114 from bronchitis, 49 from croup, 37 from typhoid fever, 30 from whooping cough, 14 from diarrhœa and dysentery, 14 from erysipelas, 13 from cerebro-spinal meningitis, 2 from measles, one from cholera infantum (in Boston), none from small-pox.

From *bronchitis* 42 deaths were reported in New York, 20 in Brooklyn, 14 in Philadelphia and Chicago, six in St. Louis and Baltimore, five in Cincinnati, two in New Haven, one in Pittsburgh, Milwaukee, Providence, Taunton, and Gloucester. From *typhoid fever*, nine in Philadelphia, five in New York and Baltimore, four in St. Louis, Chicago, and Charleston, three in Brooklyn, two in Pittsburgh, one in Providence and Taunton. From *whooping-cough*, 11 in New York, nine in Brooklyn, two in Baltimore, Cincinnati, and Fall River. From *erysipelas*, seven in New York, two in Brooklyn and St. Louis, one in Chicago, Baltimore, and Boston. From *cerebro-spinal meningitis*, four in New York, two in Chicago, one in Brooklyn, District of Columbia, Worcester, Cambridge, Lynn, Taunton, and Gloucester. From measles, one in Baltimore and Worcester. The returns from seventeen of the nineteen cities in Massachusetts, with a population of 819,500, show a considerably in-

creased mortality from diphtheria; decreased from scarlet fever and acute lung diseases. Diphtheria still prevails in San Francisco, Cleveland, and New Orleans. There is a general epidemic of influenza in Providence.

Sergeant Purcell's meteorological record for the week, in Boston, is as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.			Direction of Wind.			Velocity of Wind.			State of Weather.			Rainfall- (Melted Snow.)	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Daily Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Amount in Inches.
Jan. 12	30.21	22	30	15	67	57	72	65	NW	NW	NW	6	1	6	F	F	C	—
" 13	29.94	20	43	17	71	38	77	62	NW	W	SW	2	9	13	O	O	C	—
" 14	29.91	30	33	24	75	53	69	65	W	NW	W	1	12	10	F	C	F	—
" 15	30.37	6	28	3	55	38	48	47	NW	W	NW	12	16	9	C	O	C	—
" 16	30.02	11	20	1	74	85	80	79	N	N	N	4	8	19	S	S	O	—
" 17	30.29	21	32	8	61	64	73	66	W	S	S	4	8	8	F	F	C	—
" 18	29.79	32	33	23	89	63	67	73	S	W	W	11	16	8	R	C	C	—

Weekly Summary.	Barometer.	Thermometer.	Humidity, Saturation being 100.	Wind.	Rain.
	Mean 30.081	Mean 22.8	Mean 65.5	Total miles traveled, 1467.	Total amt. 1.11 in.
	Max. 30.39	Max. 39	Max. 89		
	Min. 29.69	Min. 4	Min. 38	Prevailing direction, N. W.	Duration, 19 hrs. 10 min.
	Range 30.70	Range 35	Range 51		

Barometer corrected for temperature, elevation, and instrumental error.

Explanation of weather symbols: O, cloudy; C, clear; F, fair; Fg., fog; R., rain; S., snow; L. S., light snow; T., threatening.

Station: Latitude $42^{\circ} 21'$; longitude $71^{\circ} 4'$; height of instrument above the sea, 77.5.

The death-rate for the week ending January 4th was for the twenty large English towns, with a population of 7,883,999, 29.1, — a decrease of one per 1000 from the previous week; for London (population 3,620,868) 27.4; Dublin, 50.7; Manchester, 36.6; Liverpool, 32.9; Glasgow, 30; Edinburgh, 25. Small-pox was decreasing in London, but still fatal there and in Dublin. Diseases of the respiratory organs were generally prevalent; whooping-cough and scarlet fever in some of the towns.

For the week ending December 28th, in one hundred and forty-nine cities and towns of Germany, with a population of 7,427,658, the death-rate was 25.7, — about the same as for the previous week. Infectious diseases remained also about the same. The deaths from diseases of the respiratory organs (508 chronic, 412 acute), diphtheria (212 diphtheria and croup), diarrhœal diseases (142), scarlet fever (93), whooping-cough (58), and typhoid fever (56) showed the highest rates; no deaths from small-pox, typhus fever, or cholera. Diseases of the respiratory organs are widely prevalent in Europe; small-pox quite rife in St. Petersburg, Vienna, and Warschau, mildly so in Paris, Budapesth, Prague, Trieste, and Odessa. Diphtheria is very prevalent in Paris and Vienna, typhoid fever in St. Petersburg and Paris.

ERRATUM. — In JOURNAL, January 16th, page 101, Prof. W. S. Harris should be Prof. W. S. Haines.

THE GYNÆCOLOGICAL SOCIETY OF BOSTON. — The ninety-ninth regular meeting of the society will be held at the Medical Library Rooms, 19 Boylston Place, at two P. M., first Thursday of February. W. S. Brown, M. D., of Stoneham, will read a paper on Ovariectomy in Great Britain and the United States. The profession are cordially invited to be present.

HENRY M. FIELD, M. D., Secretary.

BOOKS AND PAMPHLETS RECEIVED. — Twenty-Sixth Annual Announcement, Medical Department, University of Vermont, for the Year 1879.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

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LECTURES.

THE COMMONER FORMS OF VESICAL DISORDER IN WOMEN.

BY WILLIAM GOODELL, M. D.,

Clinical Professor of Diseases of Women and Children at the University of Pennsylvania, etc.

VERY few women indeed are free from some kind of vesical trouble, coming on at one period or another in the course of life, and this fact leads me to think that a brief consideration of some of these maladies, this morning, will not be unprofitable, more particularly if it enable us to formulate some well-defined principles of treatment. The anatomical peculiarities of the bladder, its position immediately behind the hard symphysis pubis, its relation to and close connection with the womb and vagina, make this organ very liable to be influenced by disturbing elements. Classifying these causes according to their source, we find that for clinical discussion it will suffice to divide them into intrinsic causes, that is, those arising within the viscus, and foreign or extrinsic, those whose origin must be sought for outside of the bladder. The disorder itself may be either functional or organic, according to the customary mode of speaking, the latter including cases accompanied by structural change in the tissues; in the former no such local lesion exists, but from nervous sympathy or reflex action the vesical functions are interfered with to such an extent as to claim the attention of the physician. Urinary troubles, as you know, are not confined to women; they exist in both sexes; owing, however, to physical peculiarities, such as the shortness and the large bore of the female urethra, and the anatomical relations of the bladder to the pelvic organs, it is seen that vesical diseases in the female may vary considerably from those of the male, and therefore need separate mention. For instance, cystitis, or catarrh of the bladder, is far more frequent in women than in men; but, on the other hand, on account of the absence of a prostatic gland, and the short and capacious urethra, the former are, as a rule, less profoundly affected by it. Vesical troubles in women may arise from precisely the same causes as those of the other sex, such as urinary calculus, gonorrhœa, irritating urine, or a chill, but the most common source, beyond all question, is some uterine disorder, affecting the bladder either

directly, or through reflex action or irritation. The next cause in order of frequency is perhaps hysteria. The third would be represented by a class of injuries sustained by the bladder during labor; for instance, the nipping or contusion which it gets from prolonged pressure of the child's head.

Since disorders of the bladder are invariably stubborn, as well as most distressing and annoying to the patient, they are worthy of our careful study. I shall, however, barely refer to the constitutional or general treatment of such affections as are common to both sexes, since it will not vary in women, and therefore comes more properly within the province of my colleague, the professor of surgery. There are, however, for reasons that are obvious, certain points of difference which we are required to observe in the local treatment, and to which I will now direct your attention.

Whenever a woman comes to you with a history of frequent or painful micturition, you must first endeavor to seek out the cause, though this is often by no means an easy task. Is it organic, or functional, or emotional? Does it lie inside or outside of the bladder? are the questions you must ask yourselves, and carefully consider. In general, when the bladder troubles arise from a catarrh of its lining membrane, the recumbent posture gives but little ease; when, however, they spring from such outside causes as displacements of the womb and pelvic tumors, the bed affords marked relief. Sound the bladder for stone, while you examine its base by the index finger passed up into the vagina. Large stones can be felt and even outlined through the anterior wall of the vagina, while a small one will rarely escape detection by this double manipulation. The clinical history of the patient will throw light on the subject; the vesical distress may have followed a labor, and then it is apparent that some internal lesion must exist.

Next consider all the extra-vesical causes. Is a uterine tumor or a displaced womb pressing upon the bladder? Is the woman pregnant? — for the gravid womb often annoys the bladder by its bulk. Is the womb fixed by pelvic inflammation, and is the rectum perfectly free from fissure or hæmorrhoids? Or is the woman hysterical or nervous? If by pursuing this line of inquiry you have happily hit upon the cause, you will next try to remove it, if you can.

As a setting to these preliminary remarks, I shall bring in two patients. The first is a young woman who bore a child about a year ago. Since then she has never been altogether free from womb troubles, but she counts them as nothing when compared with the distressingly urgent and frequent desire to pass water from which she suffers. She tells me that her labor was a short one, but that the *ardor urinae* did not come until she began to get about. She also says that she is most comfortable when in bed. Now this means either a stone or a foreign body

in the cavity, or it means some cause external to the bladder. It does not mean pure cystitis, that is to say a catarrh of the lining membrane of the bladder. Upon passing my index finger into the vagina, I find the neck of the bladder tender to the touch; pressing upon it above is the enlarged body of an over-heavy, retroverted womb. Here is a cause quite sufficient to produce all these symptoms, but I shall jump to no conclusion until I have first sounded the bladder. This I invariably do in such cases, because, if a stone be present, no treatment short of removing the foreign body will do good, and moreover the absence of a stone will confirm me in my diagnosis. I pass in the sound, and with my finger in the vagina raise the floor of the bladder to meet its tip. Finding no stone, and no rugosities on the bladder walls, in default of any other cause I am forced to conclude that it is the dislocated cervix that is distressing the bladder by its pressure. The remedy here indicated would be a pessary, which I shall at once put in, and charge her to wear. But the neck of the bladder may be so tender as to resent the intrusion of so hard a pessary as the Smith-Hodge, which is the best of all. In such a case, give belladonna in some form, and use the softest pessary you can find; Gariel's air-bag is one of the best. Our patient does not complain of the pessary, so that I have no doubt she will be able to wear it, and be ultimately benefited by it, with the assistance of a weekly local treatment to the congested womb. Let me say, in passing, that cases of frequent and painful micturition often occur in overtasked girls, or in sterile women of feeble frames, whose wombs are of natural size, but anteflexed. Now I do not think that, in the majority of these subjects, the dysuria is due to the pressure of the fundus of the womb upon the bladder. On the contrary, I believe the anteflexion to be the natural condition of the womb in virginity and sterility, and it therefore needs no local treatment. Vesical distress, in these cases, is neurotic or emotional, and arises from nervous exhaustion, produced in the one by brain cramming, and in the other by sexual excess. The bladder is hysterical, if you choose so to call it, and the motto of a hysterical bladder, as regards local treatment, should read, *Noli me tangere*. Building-up remedies and antispasmodics are here needed, together with belladonna, by the mouth, to allay the local irritation. And, by the way, let me here say that belladonna is a good stand-by in almost every form of vesical irritation. I usually give it according to the following prescription, which I can recommend:—

				Grms.
R̄	Atropinæ	.	gr. i.	06
	Acidi acetici	.	gtt. xx.	1 60
	Alcoholis,			
	Aquæ	.	āā f̄iiv.	16 M.

S. Four drops before each meal, in a wine-glass full of water. To be increased or diminished according to the constitutional effect.

But the most troublesome and obstinate of all affections of the female bladder is chronic cystitis, which usually arises from the lesions produced by labor. It comes, however, from other causes as well. The worst case I ever saw came from a simple over-distention of the bladder. Some twenty years ago the lady traveled a whole day in a stage-coach, and from motives of delicacy did not empty her bladder. When at her journey's end, she could not pass her water, and had to call in a physician to draw it off. On that day sufferings began which have not up to this day ended.

Our second patient is a terrible sufferer from this disease. She has been in my hands, off and on, for many months, and I know her history by heart. It is as follows: Her first labor took place some three years ago. It proved a tedious one, and was ended by the forceps. The prolonged pressure of the child's head on the neck of the bladder so bruised it as to cause a very distressing cystitis, which baffled all treatment. In time she grew somewhat better, but a second pregnancy lighted up all the old symptoms, and she came to me when three months gone. In vain I tried all the stock remedies by the mouth, vagina, and rectum. Finally, as she could not come into the hospital for a local treatment, I forcibly dilated her urethra, and so much good was gained by this treatment that she was enabled to follow her duties with comparative comfort, and I lost sight of her for many months. But after her second labor she became much worse than before. She tells me that she now is called upon to pass her water from thirty to forty times during the day, and from five to ten times at night. Thoroughly worn out by these endless tormina, she has come to-day to have the operation of forcible stretching repeated. This treatment of cystitis by rapid dilatation of the urethra is somewhat empirical, though not entirely irrational. It presupposes the presence of a fissure in the neck of the bladder, which may or may not exist, and, in so far as that is concerned, its employment is empirical, because we rarely can tell beforehand whether such a lesion is present. But on the other hand, it over-distends and temporarily paralyzes the urethral and vesical sphincters, thus permitting the escape of the urine with as little pain and spasm as possible. In the majority of cases the dilatation is followed by great relief; often by a lasting cure. In the latter case we would attribute our success to the previous existence of a fissure, healed, as are analogous anal fissures, by the surgical manœuvre of overstretching. Since the fact is generally admitted that fissure of the sphincter ani often succeeds labor, it is by no means improbable to suppose that in like manner fissures may be formed in the urethral mucous membrane. But you must take this on trust, for I have never yet been able to feel what I could swear to as a fissure in the neck of the bladder. Let me show you how to perform this operation. First, of course, etherize your patient as ours has been, for

the pain it causes is otherwise unbearable. Next, pass in a uterine dilator, and gently stretch open the urethra, as I am doing. It distends readily, so as to allow me to coax in, very slowly, my little finger, which has been well greased with carbolated oil. I can feel the sharp edge of the vesical sphincter give way before it, and now it is wholly in. Withdrawing this, I slowly work in my index finger, which will sufficiently distend the urethra, and which goes in still more easily. Now I am able to feel the inner surface of the bladder, which is not thickened and rough, as one would suppose, from the severity of the symptoms, but smooth and velvety. I always take this opportunity to explore the bladder for stone or other foreign bodies; for the finger is a sound with brains in it, and therefore worth much more than the ordinary metallic sound. Usually the upper margin of the meatus is slightly lacerated by this operation, and sometimes free bleeding takes place. This, however, I have, with one exception, always been able to stay by a piece of absorbent cotton moistened with Monsel's solution. The exception occurred in the person of this very woman. When I previously dilated her urethra she was pregnant. The vessels of the vulva were accordingly enlarged and engorged, so that the bleeding from the slight rent of the meatus was altogether more than I had bargained for. As no astringent seemed to be of any service, I passed in a needle deep down to the bone, and closed up the wound by a stitch. Those of you on the front seats can see the notch in the meatus still left by the former operation. Candor compels me to mention one objection to this operation, and that is the possibility of permanent incontinence following it. In my own cases this has never happened, but I saw one example of it, in which the thumb had been forced into the bladder.

But supposing this dilatation does no good; what then? Put the woman to bed; drain off her urine by such a self-retaining catheter as the Skene-Goodman. It is so short that it barely goes in beyond the neck of the bladder, and the holes in its bulb are so small that the thickened and softened mucous membrane is not likely to be sucked into them and be torn off, as it will in the ordinary catheter with larger openings. If this should fail, try a milk diet and rest. Inject into the bladder, though never more than an ounce at a time, solutions of the silver nitrate, slowly increasing the strength by two grains every other day, until thirty grains to the ounce are reached. Keep the solution in the bladder not longer than five seconds, then withdraw it, and, if the pain be great, use a hypodermic of morphia.

Weak solutions of carbolic and of salicylic acids are highly spoken of; so especially are a two-grain solution of quinia and a five-grain one of chlorate of potash. Braxton Hicks lauds a two-drop solution of hydrochloric acid. He injects this daily, an ounce at a time, repeating it until the urine flows off clear. He then follows it with one ounce of water in which from one to two grains of morphia are dissolved.

One hint about the use of the ordinary flexible catheter in these cases: when drawing off the urine do not let the tip of the instrument go much beyond the neck of the bladder, else the mucous membrane will flap down violently upon it, and be bruised.

When fluids are injected the tip of the catheter need not enter the bladder at all, but preferably should stop just short of the neck. Sometimes every kind of treatment will fail, and then we may be obliged to put the bladder at rest by making an artificial vesico-vaginal fistula. There is one more disturbance of the bladder peculiar to females, and that is incontinence of urine that may be found to follow even such slight succussions as are imparted by laughing, coughing, or by running. This generally happens in women who have borne many children, but I have seen it as well in unmarried women of weak fibre. Apart from ferruginous preparations, the best remedy that I know for this infirmity is a combination of tincture of belladonna, fluid extract of ergot, and the tincture of nux vomica. If this fails I should recommend the application of carbolic acid, or of even nitric acid, to the urethra, with proper hygienic treatment.

THE PHYSIOLOGICAL PATHOLOGY OF THE HYDROPHOBIC PAROXYSM.

BY W. R. GOWERS, M. D.,

Assistant Professor of Clinical Medicine in University College, London.

I HAVE read with much interest the instructive papers of Drs. Curtis and Putnam on Hydrophobia which have lately appeared in the *JOURNAL*. The interpretation of the symptoms connected with the respiration centre seems, however, in one respect open to question. The point is of considerable importance, since what little rational therapeutic guidance we can hope for must be by a correct appreciation of the nature of symptoms, and especially of the early symptoms of the disease.

Is the sudden respiratory distress, so readily excited by various reflex influences, which constitutes the most striking symptom of the first stage of hydrophobia in many cases, and in some remains conspicuous throughout, due to inhibition or to overaction of the respiratory centre?

The well-known analogy between some of the symptoms in hydrophobia and those produced by an affusion of cold water may help to a better understanding of their nature. The latter are generally looked upon as a result of the stimulation of the respiratory centre by the cutaneous impression. The effect is a series of sudden inspirations with a sense of shortness of breath. No doubt the respiration is of the costo-

superior type, but this fact is, I think, susceptible of explanation. In the case considered the cutaneous excitation is followed by an immediate inspiration. The latter is evidence of a stimulation of the respiratory centre, and in the absence of any evidence to the contrary we are justified in assuming that the stimulation of the centre is the direct effect of the excitation of the cutaneous nerves. The effect may be very strikingly witnessed in the case of many young children, in whom the reflex actions are so strong. A puff of air, as by blowing, on the face of a baby is instantly followed by a single inspiration. That a very strong irritation of the fifth nerve may inhibit the respiratory centre is in perfect harmony with the fact that a slighter stimulation may excite the centre, because the same difference of effect between slight and strong irritations is seen with many reflex actions. The sense of want of breath, so far from being evidence of inhibition of the respiratory centre, is proof of its excitation, because the sensation is the effect on the sensorium of the stimulation of the centre, or at any rate so invariably accompanies that stimulation under physiological circumstances that we are justified in regarding the two as cause and effect.

The analogy of the effect of a cold affusion to that of a draught of air in hydrophobia is too close to make it necessary to apply in detail the above somewhat commonplace considerations to the phenomena of the disease. These appear to me all to point to an overaction of the respiratory centre on reflex excitation, the overaction being probably of the nature of diminished resistance not to inhibitory, but to excitatory stimuli. The peculiar type of the respirations may best be understood by considering the respiratory centre as consisting — as it must consist physiologically, though perhaps not anatomically — of two portions, one having to do with the process of normal breathing, and one with the process of extraordinary breathing. The latter is that which is chiefly related to the path of cutaneous stimuli, and which is especially excited by that means; so that the costo-superior respiration (almost all the muscles of extraordinary respiration acting on the upper part of the thorax) occurs, it may be after, it may be without, a normal inspiration. This does not suggest any inhibition of the centre for normal inspiration, because the over-sensitiveness of the centre for extraordinary inspiration is so great (as evidenced by the extremely weak excitation necessary) that any disproportion between the action of the two parts may be amply accounted for. It is evidently an important condition in physiological economics that stimulation of the extraordinary centre should not involve stimulation of the other, because the extraordinary centre commonly acts after the other has reached its full extent of action. During an extraordinary inspiration the diaphragm cannot act with effect on account of the position of the ribs, and commonly does not act.

If the phenomena of the hydrophobic or "aerophobic" spasm depended on the reflex inhibition of the centre, the inspiratory efforts, however partial, and the sense of want of breath could only be accounted for by a gradual stimulation of the inhibited centre by the accumulation of the physiological stimulus anoxæmia; and if the centre is inhibited, a greater degree of anoxæmia would be needed to liberate the inspiratory movement than in health. But such a theory both the aspect of the patient at the onset of the paroxysm and the instantaneous effect of the cutaneous stimulation seem to exclude.

The nature of the symptoms and lesions in hydrophobia seem to suggest that the poison has an action on the nervous centres in the following order: the medulla oblongata, the cerebral hemispheres, the spinal cord. The effect on the medulla is the first, most intense, and most constant, especially in the early stages. The action on the spinal cord is rarely marked, except in the latest stage. The action on the cerebral hemisphere is chiefly shown in the delirium which is so conspicuous in some cases in the later stages, and which indicates a much more extensive and profound disturbance of the hemispheres than exists in the early stages. In the latter, the chief affection of the higher functions is in the same direction as the affection of the lower, and, as Drs. Curtis and Putnam point out, the disturbance of the higher centre appears to intensify the disturbance of the lower. It seems possible, also, that the direction of the early affection of the cerebral hemispheres may be determined by the central effect of the bulbar disturbance.

No doubt the primary irritability of the respiratory centre is a sign of weakness, and in many cases passes on afterwards to exhaustion and failure, just as it may lead to the imperfect action between the paroxysms. But in some other cases the evidence of disturbance of the respiratory centre ceases entirely during the later stages of the disease. The pathological changes which are found in different cases, similar in character, vary much in degree, and, though almost always most intense in the respiratory region of the medulla, are in some cases much more marked in the cerebral convolutions or in the spinal cord than in other cases, just as are the symptoms, and hence probably certain "types" of the symptoms may be conveniently established. The variation of the changes in degree seems to suggest that although they doubtless have their own results they are the consequence rather than the cause of the disturbance of the nerve centres, which may be best ascribed to the primary effect of the poison on the nerve elements. I may add that at the Bath meeting of the British Medical Association I showed before the hydrophobia committee sections from four cases in man, which I have examined, and from one case in the dog. The lesions were in every instance similar to those found in the four earlier cases published in the *Pathological Transactions*. In the dog they were

similar in seat and character, but more intense. As a striking illustration of the similarity of the lesions in this disease, I may mention that two persons who had seen the specimens exhibited at the Pathological Society, after inspecting the sections at Bath, remarked that they at once recognized the sections as those which had been shown at the Pathological Society, the fact being that they were from different cases of the disease.

WOODBERRY VERSUS ROBINSON.

It is commonly supposed that in all actions at law involving medical questions the testimony of physicians, and especially of medical experts, is an important and necessary element to a clear understanding of the case. But the recent decision of a probate judge, coupled as it was with a recommendation as uncalled for and unjudicial as it was novel, seems to imply that lawyers are fully as competent to decide upon purely medical questions as the doctors themselves.

In the case to which we refer the point at issue was whether the defendant, father-in-law and guardian of an insane person confined in the McLean Asylum, at the request of his wife, and upon the certificate of two properly qualified physicians, one of whom was an expert in mental diseases, the other a prominent and leading practitioner of this city, was a proper person for that position; whether he ought not to be removed, in that the plaintiff had recovered by reason of his return to sound mind and understanding; and whether, if a guardian should be necessary, one less obnoxious and displeasing should not be selected. The testimony for the plaintiff failed to prove the guardian's unsuitableness and his ward's sanity, notwithstanding the number and character of the witnesses, and their well-known disinterested probity. The plaintiff was placed on the stand by his attorneys, and his conduct, while it may have been a matter of great surprise to his legal advisers, too faithfully portrayed the unsettled condition of his mind and his evident want of self-control.

The testimony for the defendant, however, showed that the guardian was appointed by this same probate judge; that he had always been attentive to the wants of his ward, and had abundantly supplied him with the necessary comforts of life, the testimony of his mother to the contrary notwithstanding; that the plaintiff labored under delusions of realistic wealth, and indulged in extravagant and exaggerated statements generally; that he was violent, paroxysmally excited, and, at the time of the trial, unsafe to be at large; that he entertained feelings of hostility towards his guardian, and was constantly threatening him in one way and another, — would have his heart's blood, would mutilate his person, would strip him of his property, would imprison him, would

have recourse to law, — simply because he was his guardian, and had placed him in an asylum for the better protection of the man, and as a means of prolonging his life if possible. It was further proved that the plaintiff was easily excited, was readily thrown off his balance, and that on the part of those who had charge of the case the utmost care and circumspection were needed to prevent outbursts of excitement, as well as to quiet a mental state always on the eve of an explosion; that he had the peculiar modification of speech characteristic of general paresis; that he had been examined by a number of prominent physicians, all of whom were agreed as to the nature and hopelessness of the case; that he enjoyed certain liberties, and was allowed as many privileges as was consistent with a judicious and proper treatment of the case; and finally, that the offer to go outside with a trained and experienced attendant, at a proper time, had been angrily rejected on the ground that he was "all right," and not insane.

The only medical expert called was Dr. Walker, of South Boston (the officers of the asylum being subpœnaed as witnesses testified merely to facts), and he stated that the plaintiff was laboring under that variety of mental disease known as general paralysis of the insane, from which there is no known release except in death; that the more comfortable state in which he seemed to be was only apparent, not real; that though incurable, and the disease of limited duration, such cases were much better off and survived longer under the judicious, well-regulated, and restricted life of an asylum than when surrounded by the liberties and temptations of an unrestrained and ill-regulated life. Notwithstanding this evidence, fully corroborated by a large number of witnesses, the judge, while he did not decide to release or change the guardian, did, however, state that as, *in his opinion*, there was a chance for the plaintiff's recovery, and as it was unsafe for him to return to his family, and as it appeared he was too much irritated by the restraint of an asylum life, the plaintiff should be removed therefrom, intimating that an extended tour with an attendant would prove highly beneficial, and perhaps induce the recovery of which he was so confident!

The matter has an especial interest to all the members of the medical profession, in that it shows that there is a tendency on the part of certain judicial lights to ignore important medical expert testimony, whereby only a thorough, competent, and satisfactory knowledge of any medical case can be obtained. A case similar to this recently occurred in New York, and if such a course is to be pursued in the future what security will physicians have that justice will be done to an insane man, to his friends, or to the asylum officers; that fairness, impartiality, and a thorough, honest consideration of a case will have just recognition? To admit insanity, to deny an application for a removal and discharge from guardianship, on the ground that a man is violent, unsafe, easily

irritated, and paroxysmally excited, and then in direct contradiction to the well-known fact that general paralysis is absolutely incurable, as was done in this case, for a judge to advise removal from an asylum, simply because he felt that the man was better than when admitted, and his recovery possible, is certainly a novel legal procedure, worthy of criticism.

It is of course desirable to protect the interests of the insane, but it is none the less important for the welfare of society that sense should not be overridden by sentimentalism, and that dangerous men should not be let at large in the community. In such a case as this we need a few of the safeguards of English law, whereby any one who takes the responsibility of removing a dangerous patient from custody is obliged to give bonds that nothing shall happen to the injury of any person or property by his course.

[NOTE. It is interesting to know, as a sequel to the Woodberry case, that the patient has become unmanageable in California, his case having been pronounced to be one of general paralysis, and his return home advised. He is said to have failed considerably, having partially lost control of the sphincters, and having at times been violent, requiring two attendants to care for him. On board ship it was found necessary to put him in irons for a time. He returns to the McLean Asylum.]

RECENT PROGRESS IN THE TREATMENT OF CHILDREN'S DISEASES.¹

BY D. H. HAYDEN, M. D.

*Examination and Semeiology of the Ear in Childhood.*² — Dr. Julius Böke, instructor in diseases of the ear in Pesth University, Hungary. The use of the Eustachian catheter is impracticable before the fifth or seventh year, and in very young children we can obtain no information as to the functional activity of the organ of hearing. Our examination is therefore limited to the external ear, the external meatus, including the drum membrane, and the nasal cavity. An imperfect development of the external ear points to an intra-uterine arrest of growth. We find coexisting, as a rule, an absence of the meatus and of the tympanic cavity. Even when this absence is limited to one side there is generally complete deafness. Subjective symptoms, denoting some pathological change, are rarely met with before the fifth or seventh year. Certain physiological processes, which are ordinarily terminated during the first three or four months of life, may last on into the second year. The cavity of the tympanum, namely, in new-borns is filled with an

¹ Concluded from page 155.

² *Jahrbuch für Kinderheilkunde*, N. F. xii. 4, 1878.

abundant secretion of mucus, which later gives place gradually to air, finding its way through the Eustachian tube. The mucous membrane of the tympanum and of the drum membrane, which, in the adult, has nearly disappeared and become merged in the periosteum of the tympanum and the membrana propria of the drum membrane, still exists at this period of life, and is abundantly supplied with mucous glands, and is more or less puffed up. We can easily understand that under these conditions the power of hearing is possessed only in a very slight degree; and doubts are entertained by many authors whether newborns and infants up to three or four months of age can hear at all. The perception of loud noises does not of course determine the existence of this power, for deaf and dumb persons are able easily to distinguish the sound of a drum and the ringing of bells. The best test to make use of in older children is the human voice.

The direction of the meatus externus in childhood is more vertical than in the adult, and consists of a membranous cartilaginous tube, ossification proceeding gradually, and not being completely effected until the tenth year. There remains occasionally in the anterior lower wall a spot the size of a lentil which does not become ossified. The dura mater penetrates through the fissura petroso-squamosa to the mucous membrane of the tympanum; and there is thus established a communication between the abundant blood-vessels of this membrane and those of the membranes of the brain. We therefore find a plausible explanation of the cerebral symptoms that often accompany diseases of the ear, as well as of the frequent extension of inflammation to the parotid gland and inferior maxillary joint, and of the existence of sinking abscesses in the neighborhood of the ear without caries. A frequent seat of such abscesses is over the mastoid process, a fistulous passage extending outwards from the external meatus and terminating over this process. In connection with purulent affections of the external meatus there are often found swelling and hypertrophy of the glands of the neck without necessarily implying the existence of scrofula. A rational treatment of the so-called otorrhœa causes their disappearance. The same can be said of the pale, pasty complexion accompanying these discharges, due to faulty nutrition, upon which a chronic suppuration exercises no small influence. Where a scrofulous diathesis, as manifested by other symptoms, is not present, a healthy, blooming look is restored with the cessation of the discharge.

Foreign substances not rarely get into the ears of children. Larger objects never go beyond the bend in the anterior lower wall. No trouble is caused by their presence; but unskillful attempts to remove them are often followed by serious inflammations. Insects sometimes make their way into the ear, and cause violent pain by their movements. In chronic suppurations of the external meatus flies are sometimes expelled during

syringing, and in the summer five or six larvæ may fill the ear and adhere so firmly as to be removed with great difficulty. Large horse-flies find this a favorite spot to lay their eggs, and their maggot is so large as alone to entirely fill the passage. Long-continued and neglected inflammations can be the cause of funnel-shaped strictures of the meatus. The canal can become completely closed by the growing together of the two inflamed surfaces, and be finally the seat of a trough-shaped cicatrix, a *restitutio ad integrum* being no longer to be spoken of.

Idiopathic isolated inflammation of the drum membrane is not frequent. Dark grayish membranous formations are sometimes seen firmly adherent to the drum membrane. Under the microscope they prove to be a fungus,—the *aspergillus glaucus*. Linear perforations are caused by sudden compressions of air, as boxing the ear. Large losses of substance are due to suppurative inflammations of the tympanum. When the perforation is small it sometimes becomes filled with a watery mucus, or with pus, and, reflecting the transmitted light, is seen as a shining spot, pulsating synchronously with the heart's beats,—the so-called pulsation in the membranum tympani. Round circumscribed opaque spots and crescent-shaped deposits of lime are to be regarded as the sequelæ of inflammatory processes in the tympanum. Round spots are sometimes met with which appear thinner than the neighboring parts. These are the seats of earlier perforations, closed by thin cicatricial tissue.

We often find nasal catarrh and deafness associated together, and the latter is then due to an obstruction by mucus of the pharyngeal opening of the Eustachian tube; or else the catarrh has extended into the tube itself. Enlarged tonsils of themselves do not occasion deafness. In cases of long-continued suppuration of the tympanum streaks of pus which have escaped through the Eustachian tube are sometimes to be seen on the walls of the naso-pharyngeal cavity. Deafness may be caused by syphilitic ulceration and cicatrices at the mouth of the Eustachian tube, thereby obstructing it.

Acute inflammation of the tympanum is often ushered in by severe cerebral symptoms. The formation of pus in this cavity and its escape by perforation of the drum membrane are often preceded by high fever, loss of consciousness, delirium, hyperæsthesia of the cutaneous surface, and convulsions, which symptoms last sometimes two or three days, and then cease abruptly with the escape of pus from the ear. The author emphatically urges the importance of always making an examination of the ear in cases presenting such stormy and disquieting symptoms, even when there is no evidence of pain in the ear; for there are no prodromal symptoms peculiar to inflammations of the tympanum, and we are unable to obtain from infants a description of the seat of their pain. The rapid disappearance of these severe symptoms, with

the establishment of the so-called otorrhœa, might lead to the erroneous opinion that the latter were a *noli me tangere*, and that its cessation would necessitate some other evil, a view held quite commonly among the laity, and, what is to be regretted, not infrequently by physicians. When the discharge is of offensive odor and of cheesy consistency this is due to a want of proper means for effectually evacuating the pus which accumulates in the tympanum and deeper parts of the external meatus, and decomposes.

Where inflammation of the tympanum lasts months or years, and caries ensues, this can attack vital parts, as, for instance, the anterior bony lamella that forms the carotid canal. A fatal hæmorrhage from this cause happens more frequently with children than with adults. Where paralysis of the facial nerve occurs, this is not always the result of caries of the Fallopian tube. The bony wall of this tube may be wanting, and the neurilemma be in intimate contact with the mucous membrane of the tympanum. The paralysis may thus be the result of an inflammation of, or of a collection of pus in, the Fallopian tube itself. It is not rare for caries of the tegmen tympani or of the walls of the fossa sigmoidea to take place, followed necessarily by a destruction of cerebral substance or by abscesses in the brain, with fatal termination. Cases have been reported where carious portions of the petrous bone, cochlea, etc., have been discharged with the pus, and recovery has taken place. In most cases, however, the thickened walls of the tympanum act as a protection to the labyrinth, and prevent its invasion by extension of the inflammation. In many autopsies, where there had been caries of the walls of the tympanum, with loss of the hammer and anvil, the author has found the stirrup firmly imbedded in the fenestrum ovale.

Diseases of the labyrinth and of the terminations of the auditory nerve present very little in the way of distinguishing symptoms. In many cases of deaf-mutism nothing abnormal is found in the conducting apparatus of the ear.

Total deafness, with a staggering gait, which latter, however, disappears in the course of a few months, is sometimes met with in children as the sequelæ of a severe illness. This disease attacks children up to eight years of age, and sometimes appears as an epidemic, though it is also met with sporadically. The author had opportunity in 1868 and 1869 to see many such cases. Without premonitory symptoms, a child falls suddenly down with a sharp cry, is unconscious, has high fever, with the head bent backwards, and becomes completely deaf. Examination of the ears shows, as a rule, no pathological changes, though sometimes there are found the signs of an inflammation of one or both tympana. It is difficult in such cases to decide whether we have to do with an epidemic cerebro-spinal fever, or if there be apoplexy or some other pathological

process at the place of origin of the auditory nerves. The author is inclined to the latter view. With the exception of deafness we find no other functional disturbance; and the facial nerve, which is intimately connected with the auditory nerve at the base of the brain, is not affected.

*Fifteenth Annual Report of the Jenner Children's Hospital at Berne for the Year 1877.*¹—Professor R. Demme gives statistical statements of the results obtained with different artificial infants' foods, and reports several cases of so-called "fat diarrhœa of infants." In these cases the faecal discharges contain a very large percentage of fat, and Professor Demme abandons the use of milk, substituting a mixture of white of egg in water, with addition of milk, sugar, and a little cognac. As medicament he uses minute doses of calomel and opium, and employs lukewarm baths, wrapping the body in cloths wrung out with water.

There came under observation in the out-patient department a family in which a boy five years old was taken sick with scarlatina unaccompanied by diphtheria. Later, two girls of the same family were attacked by diphtheritis faucium. One of these girls, during convalescence and twenty-three days after the beginning of the disease, was sent into the country. Eleven days after her arrival, a boy seven years old, living in the same house, was taken sick with a mild attack of scarlatina without diphtheria.

Of two cases of pseudo-muscular hypertrophy in brothers, aged respectively ten and eight years, it is worthy of note that the urine of one of them contained sugar in large amount, though not present continuously.

Experiments with chloroform, bichloride of methyl, and chloride of ethyl proved the first to be always the most suitable for anæsthetic purposes.

Cases of bronchocele were repeatedly met with. Of these one was an acute case, which came on in a patient affected with intermittent fever. The tumor increased in size perceptibly during each paroxysm. Quinine cured the intermittent fever, and shortly afterwards the tumor also disappeared.

Paracentesis Thoracis.—Two cases have been recently published where this operation has been performed at the extremely early age of four months. The first case occurred at the London Hospital, in the service of Dr. T. Barlow.² A. F., aged four months, had been ill six weeks with cough and some diarrhœa, but without dyspnœa in the ordinary sense. Physical examination pointed to an effusion in the left side of chest. An exploratory puncture was made with a hypodermic syringe,

¹ Berne. 1878. 56 pages. Centralblatt für die medicinischen Wissenschaften, November 2, 1878.

² British Medical Journal, August 31, 1878.

and pus was withdrawn. The patient was then chloroformed, and, with the aspirator, four ounces of pus were brought away. The subsequent course of the disease was a favorable one. Dr. Barlow remarked that in young children inflammatory processes were much more likely to suppurate than in the adult; and that, when we have to do with a doubtful dullness in a very young child, an exploratory puncture is important, as, if fluid be present, it is probably pus.

The second case referred to occurred in the North Eastern Hospital for Children, and is reported by Dr. Cayley.¹ George W., aged four months, had been suffering for one week previous to being brought to the hospital with cough and dyspnoea. Physical examination showed the presence of a large effusion in the left side of the chest. Aspiration was performed, and eight ounces of a turbid serum were removed. The dyspnoea was at once relieved, and did not return. One week after the operation the child was quite well, with the exception of a slight cough. The percussion resonance continued still much impaired, and the breathing was somewhat tubular. This was the first case of the kind that had been met with at this hospital under twelve months of age, although it was the practice to auscultate every child suffering with dyspnoea. Several cases of empyema and of simple pleuritic effusion in children between twelve months and two years of age had been published.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. G. CUTLER, M. D., SECRETARY.

MEMORIAL MEETING TO DR. JOHN B. S. JACKSON AND DR. JACOB BIGELOW.

JANUARY 13, 1879. After the election of officers for the ensuing year the regular exercises of the society were omitted, and DR. D. HUMPHREYS STORER was asked to take the chair, and preside over a memorial meeting to Dr. John B. S. Jackson and Dr. Jacob Bigelow. On assuming the chair Dr. Storer said:—

“Gentlemen, as the only survivor of the twelve gentlemen who met in 1828 to form this society, I comply with your request. My brothers, we have met to pay a tribute of respect and esteem and affection to the memory of a departed friend. Elsewhere a glowing eulogy has already been offered by the same truthful hand which has portrayed the characters of Wyman and of Clarke. But it has been thought well that some token of our regard, some expression of our deep bereavement, should be entered upon our society's records. You well know the devotion of Dr. Jackson to the interests of this society; for many years he has been unwearied in his attendance upon our meetings. With what fidelity and enthusiasm he engaged in our discussions! With what pleasure and pride he dwelt upon its usefulness! He has left a great void; we feel it; we are here to acknowledge it.

¹ *Lancet*, December 7, 1878.

"Nor should we forget to recall the example of our elder brother, for so long a time New England's medical luminary. Its light is extinguished, but succeeding generations will gaze with admiration upon its former illuminated track."

A committee of three, consisting of Dr. Henry I. Bowditch, Dr. Morrill Wyman, and Dr. Calvin Ellis, was appointed to present resolutions on both Dr. Jackson and Dr. Bigelow, and in the mean time the chairman called for remarks by any of the members.

DR. AYER said, "A feeling of sadness pervades the hearts of us all this evening, Mr. Chairman, in view of the sudden death of our late worthy associate, Dr. J. B. S. Jackson. The record of the last meeting of the society, only three short weeks since, just read by the secretary, vividly reminds us that our departed friend was present on that occasion, and reported cases, and made extended remarks on a variety of topics presented. He was one of the oldest members of this society, and it is no injustice to others to say that he was our most active and efficient member; indeed, he was the backbone of the association. The Anatomical Cabinet is a monument of his untiring industry and patient care. The interest of our meetings was constantly promoted by his unfailing presence and zealous efforts. We, more than others, will feel this sad bereavement; and each individual, like myself, must feel that in his death he has experienced a serious personal loss. How or when, if ever, this great loss can be repaired we know not.

"My recollections of Dr. Jackson are especially pleasant. In the winter of 1845-46 I came to Boston, and soon after formed his acquaintance. He was then in the vigor of early manhood, and eagerly devoted to his specialty, pathology, and more or less engaged in general practice. It was my fortune to meet him frequently, and I was early impressed by the purity of his character, his inflexible integrity, untiring industry, and tenacity of purpose. There was an exactness and precision in all his aims, and a method in their execution, which rendered his teachings lucid and attractive. The care and delicacy which he always manifested in dealing with the language and motives of his professional brethren formed a prominent feature of his character. As a practitioner he was eminently conscientious. This very morning I met a lady, whose family Dr. Jackson attended for many years, who spoke of him with tender emotion, recalling his gentleness of manner and great kindness and sympathy shown in trials. When one of the children was sick the doctor made an extra visit at eleven o'clock at night, walking a mile, to be sure that the medicine was given correctly. May the lessons of such a bright example, and also those from the life of Dr. Jacob Bigelow, the patriarch of our profession, so lately passed away, prove lasting and salutary in their influence."

DR. CHEEVER said that he felt some modesty in speaking before many of the contemporaries of Dr. Jackson, but there was one point he wished to dwell on in Dr. Jackson's character: the lesson of his life was *devotion to an idea*. Single-hearted and unwavering pursuit of an idea in life always led to success. Most physicians were diverted from the sole pursuit of science by the pressure of other claims to their attention: some by social claims, some by wealth and ease, some by money-getting, and some by public life. Dr. Jackson had

devoted his whole life, his whole heart, and his whole strength to the sole cultivation of pathological anatomy, and he had pursued this all through his earlier years in poverty. He was the first pathologist of the United States in order of time, and long stood alone. He was also, hitherto, the first pathologist of America in order of eminence. He could be compared to Rokitsansky and to Cruveilhier, whom he was so fond of quoting. The later microscopic school, the histologists of diseased tissues, he could not be compared with, for he did not belong to them.

He had his reward, for his was a singularly happy life, as is that of every pure devotee of science. Often thrown in with him during some eighteen years of his connection with the Medical School, Dr. Cheever had always regarded him as one of the purest and simplest of characters. He was always eager to apologize for the slightest apparent injustice done to others, and he was also ever most punctilious in awarding to every one the full credit of an idea, a case, or a specimen.

DR. HODGES spoke of Dr. Jackson's zeal and painstaking as an instructor, so well remembered by the students of twenty-five years ago, when there were no text-books on the subjects which he taught. His early lectures and demonstrations were exceedingly valued by the privileged listeners or witnesses, and his enthusiasm was a great stimulus to those who were brought into personal relations with him. He spared no labor or trouble to show to a single interested person the treasures of his museums, and such a visit was rarely forgotten. His methodical habits and precision were not easy to imitate, but however exacting he was in details he always secured the attachment of his assistants, and even of subordinates on whom the responsibility of executing his wishes devolved. He took a strong interest in young professional men, and was constantly testifying his fondness for young persons in general. He had no enemy, and the entire medical profession, and the community where he was so well known, held him in the highest esteem for his simple, unaffected earnestness.

DR. BOWDITCH, chairman of the committee, read the following resolutions:—

“Resolved: That this society has heard with the deepest sorrow of the recent death of Dr. John B. S. Jackson, whose honorable character and constant care for the best interests of this society have endeared him to all its members.

“Resolved: That the excellent anatomical cabinet of this society, now in the possession of Harvard University, had its origin, more than forty years ago, in Dr. Jackson's enthusiasm for pathological anatomy, and through his individual labors it has become one of the most valuable collections in the country; and therefore it is most fitting, according to a vote passed by the society May 8, 1871, that the specimens should be hereafter labeled as belonging to the Jackson Cabinet of the Boston Society for Medical Improvement.

“Resolved: That our warmest and most respectful sympathies are tendered to the widow and children of Dr. Jackson in this their great bereavement, and that the chairman and secretary of this meeting transmit to them a copy of these resolutions.”

Dr. Bowditch paid tribute to the constancy of Dr. Jackson's devotion to his department of medicine; his high character as a man, his pure sentiments, and

kindly feelings were alluded to. He never meant to give offense; although feeling himself supreme in his own department he at times spoke quickly. But these expressions all of us knew meant nothing but his professional zeal. His heart was too tender to allow him ever willingly to speak harshly to any one. He was always strictly truthful, and his character in this respect was delightful to reflect upon. He and the late Jeffries Wyman were alike in this particular, and in their hard labor on difficult and on what, to many persons, were uninteresting subjects. He died at the right time, as he could not fully accept, or perhaps appreciate, some modern methods of investigation; of the microscope he knew nothing, and he made no pretensions to such knowledge. He died full of fame and of the respect of the community. His final disease caused little or no pain, and he worked, up to within a few days of his death, in his favorite pursuits. It is a most touching reminiscence that, in the records of the last meeting, Dr. Jackson's name appears almost alone, and the earnestness and interest with which he talked of the specimens of well-united fractures, found in wild buffaloes of the West, will be long remembered.

The resolutions presented by Dr. Bowditch were unanimously adopted.

Dr. Jacob Bigelow. — Dr. Bowditch then presented the following resolutions in behalf of the committee: —

“*Resolved*: That this society cannot permit this first meeting, since the death of Dr. Jacob Bigelow, to pass without recording its profound admiration of him as a man of rich literary and scientific culture, and as a physician of the highest rank; and the society recognizes in his death the departure from among us of the greatest and widest known leader of the medical profession in New England during the past century; and this leadership is owing to his early writings and teachings upon the occasional Self-Limitation of Disease, and in his reliance upon nature, as well as art, in the practice of our profession.

“*Resolved*: That the serenity with which he bore his many afflictions, for so many years, excites our warmest admiration.

“*Resolved*: That the society tenders to the widow and children of Dr. Bigelow its most respectful sympathy, and the chairman and secretary are directed to send them a copy of these resolutions.”

Dr. Bowditch afterwards spoke as follows: —

“Dr. Bigelow was born February 27, 1786. I called upon him only a few days before he reached the end of his ninetieth year, and with a few words as preface, I will repeat the greater part of our conversation. I have ever acknowledged him as ‘*facile princeps*’ of the medical profession of New England. He was naturally kindly. He had, at times, very decided opinions, and usually kept a complete control of his words in the expression of them. He had a great fund of genuine wit. He had always remarkably clear perceptions of things, and his opinion carried great weight, because his wise judgment prevented him from imprudent speech or action. I have at all times considered him one to whom I could appeal and feel sure of an honest reply. Those who were his intimate friends have always loved him. All may love him now, so beautiful does he seem as he lies helpless, but bright and tranquil, gradually approaching death.

“He was graduated in 1806, and having been born only ten years after the

revolution of 1776, his life nearly spans the centennial period. I knew he must have seen some of the principal actors of those early days, and I wanted therefore to get from his lips reminiscences of physicians, whose works I had read.

"As the Philadelphia School of Medicine has always been the most powerful of any in America, and as one of the professors was a signer of the Declaration of Independence, I asked Dr. Bigelow first about that school. Dr. Bigelow's manner of delivery was always very slow, and that slowness of speech had augmented at least fourfold. During our conversation, he sometimes seemed to have ceased wholly, so long were the intervals between his terse and clear utterances. In the earlier part of our interview, I am afraid I lost something by asking a second question before the first was quite answered. I will try to give, from my notes, taken at the moment, most of the remarks he made, and as far as possible in the very words:—

"Yes, I knew the professors of the Philadelphia school. They have always claimed to have the best doctors there. I and two others were the sole New England students. Rush and Wistar I knew. They were kindly, and the latter, especially, was warm-hearted. They received the students. Physic was a savage, and would have no intercourse with us. We never were allowed to enter his house. Barton (B. S.) was egotistical; a bad reader and speaker. Rush was enthusiastic and eloquent; a great believer in medicine and drugs. He was an ultra practitioner. He often said, "We can have no reliance on nature, gentlemen. We must turn her out-of-doors in our practice, and substitute, for her, efficient art." When I was in Philadelphia, there was constant battling going on between the professors belonging to the faculty. Rush and Physic were on one side, Wistar and Barton on the other. The Philadelphia school had many students from all quarters of the country except from New England. Very few went from here."

"I asked him about Drs. Hosack and Francis, of New York. He had little to say of them, and after I left he remarked to his daughter that he meant to have said something. As Carlyle says of Washington, I thought, from his manner, that he felt they were not very 'immeasurable men,' or such leaders of medical thought as the Philadelphians had been. I spoke of Nathan Smith, of Dartmouth College, and afterwards of Yale, a man whom I had always thought to be, and do still think, one of our greatest New England men,—a man of great natural powers, which, it is true, were but imperfectly cultivated compared with those of Bigelow. 'Smith?' said Dr. Bigelow. 'Well, I always thought him a quackish sort of man. He was inclined to claim Dartmouth as a great centre of medical learning.'

"Of the first president of the Massachusetts Medical Society, Dr. Holyoke, he slowly enunciated the following: 'Holyoke! Indeed, the only remarkable circumstance about him was that he lived till he was one hundred years old, and was bright then.' I do not think that Dr. Bigelow had a sufficiently high estimate of the worth of either of these men, who were really great in our profession. If they were not leaders, I know not who may be deemed leaders. Certainly they both stood, and stand now, preëminent among their associates in the medical societies of that day.

"I then turned his attention to Louis, and to the effect, if any, produced by

him and by his works, and he spoke somewhat as follows: 'Before Louis's coming, a great many believed implicitly in the power of medicine to cure diseases, and it would have been deemed a heinous dereliction of duty not to prescribe a certain round of medicines in every disease. For example, when I began practice, I myself always felt obliged to give an emetic in every case of supposed commencement of fever, or I should have been held, and should have considered myself, as responsible for the death of the patient, in case he should unhappily have died under my charge. Louis checked all this, and taught us the importance and necessity of a closer study of medicines and of each fact in medicine.' Though Dr. Bigelow said little if anything more, I inferred that he considered Louis's influence good in overcoming the tendency to believe in the common rules, previously laid down for medical practice, and to which Dr. Bigelow had himself submitted for a season.

"We then spoke of the times when Asiatic cholera struck our shores. He immediately commenced the following account, and went on uninterruptedly, save by the long intermissions between his terse, nervous sentences, as above alluded to: 'Yes, I remember those times. There was intense excitement in Boston when the news came of cholera breaking out in New York. The city council immediately chose a medical commission to visit New York, in order to learn all that could be ascertained for the benefit of Boston as to the treatment of the disease. I, Dr. John Ware, and Josh. Flint (at that time the doer of the drudgery of the city work, called city physician) were the sole members of it. I hardly remember how we went, but I think by way of the Sound boat, and arrived at the usual hour at New York. On landing we were immediately struck with the stillness that pervaded the city. It was still as death. There were no carriages, no pedestrians, in the street. Everything seemed stricken down. We went out into Broadway. I said to Ware, "Ware, this is Broadway." "Yes," he replied. "It is the city of the plague!" We could not choose a boarding-place. No,' he immediately said, 'I should say we found it hard to select a boarding-house. All were vacant, and to select among the vacancies was difficult. Everybody was flying from the city to avoid the malaria. Indeed, people were dying at a rapid rate. We went to the hospital. A few patients came in, and I said to Ware, "Let us mark these patients all freshly attacked, and let us take notes of the progress of their cases." Accordingly we marked down the names and beds of those most sick. Before night one half of them were dead! I saw several beds with two women in them; one was dead, and the other still alive. I saw several dead, but unremoved, bodies lying in the ward. The medical men were all at their posts, trying to do what they could, but many of the nurses fled. It was hard to procure others. The current remark of every one was, "The disease is death!" "If a man be taken he is gone!" They did, indeed, die in an incredibly short space of time. I said to Ware, "Look at those young and apparently strong men and women, just entering the wards, persons who have a right to get well, if drugs will cure them!" And yet, at our evening visit, the attendants were laying them out! We could learn nothing that cured, and thought it useless to remain. Accordingly, at the end of three days, we decided to return to Boston to make our reports to the authorities. All was panic in New York, and *we drove a wave of panic before us*, so that, on our arrival in

the boat before Providence, a small boat came off telling us we could not and should not land. They would have no intercourse with New York. We protested, but in vain. Various messages passed between us and the town authorities. Whilst the latter were deliberating, a crowd of excited citizens surrounded the building, and declared that none should land. Finally, it was told to us that the coach would be allowed to take us up at Seekonk, on the other side of the river. Seekonk is in Massachusetts, and that State might take care of itself; but none coming from New York should traverse Rhode Island. We retreated to Seekonk, and got back to Boston about midnight. The next day we reported to the city council. Our report was so unfavorable that its worst parts were not allowed to appear in print, for fear of exciting a panic in Boston.

"I referred again to the memorable fact that, while all else were flying from the pestilence, the physicians stood bravely at their posts. He added this noble tribute to our profession. 'During my life, I never have seen a medical man refuse to attend upon any case, however dangerous, when he alone was concerned. Where he would be liable to carry contagion to any other patient, he would of course decline, and thereby resign virtually his practice.' Then, as if thinking that, as a general rule, no physicians ever regard personal danger when called to one sick, he added: 'I can truly say that, while in New York, the thought of danger to myself never once occurred to me.'

"I spoke of the modern ideas involved in the expression 'State or Preventive Medicine.'

"'Epidemics usually,' he said, 'have been short, though at times severe, and when finished the people feel relieved, but have taken no measures of prevention for the future.' To the thought of state or preventive medicine, as at present understood, his mind had evidently not been led. Probably this was natural, because his life-work had been simply to destroy our sovereign faith in drugs, and to fasten the belief that diseases once produced would in many, perhaps in most, instances run their course, and that the most that physic (using the term in its widest sense) could do would be to relieve and palliate the more prominent symptoms. In other words, his labors, after resigning his professorship of materia medica were, first, utterly to break down what little confidence he had given us in the materia medica; and, second, to inculcate in us a love of nature as the curer of disease by self-limitation.

"Thus about twenty-five years after listening to Rush did Dr. Bigelow propound opinions precisely the reverse of those of his great master upon the relative merits of nature and of art, as handmaids to the physician. Neither Rush nor Bigelow seized the modern idea of state preventive medicine. In our conversation, I thought I recognized that fact, and I tried to unravel before him my views of the matter. I spoke earnestly, because I believed warmly in the future success of that idea, now just beginning to germinate in this country and in Europe. He listened attentively, and when I had described how much I hoped from the study, under the power of the State, of the causes of disease and for the prevention of them, he *chuckled* as he lay in bed, and looked like his old self, when enjoying a quiet joke. I said nothing, but expected something racy from his clear head. His assertions had been, at times, so pungent, so precise, and generally so true that I thought, from his manner

while listening to my remarks, I should get some reply a little grotesque, perhaps; but I did not expect so much of genuine good sense as is contained in the following sentences, which were poured forth with the greatest deliberation, but without the least change or hesitancy of speech:—

“Preventive medicine! Well, doctor, you lay out a wide field! You will have to prevent intemperance! How can you prevent the imprudent exposure of men and women? You will have to teach them what common sense calls prudence. For example, suppose a public ball or public dinner; how prevent men and women from running into that fire? You will need almost despotic power to do that. Then, if you should attempt to use your power, you would have fifty thousand opponents to rise up against you to prevent your orders from being carried out.’ Here he remained silent, and then quietly brought out the following most wise culmination of all our talk: ‘All that can be done will be to try to open the eyes of the people to the dangers which surround them, by a candid exposition of the facts and of their consequences.’ And perhaps that *is* really all that can be done, but even that is a vastly nobler, if a heavier, task than to carry on contests like those of preceding ages for the support of many theories, set up by one great leader after another, each and all to be knocked down by their successors.

“I left Dr. Bigelow after a two hours’ conversation with him, deeply impressed with his really very able mind, which at the age of ninety was so clear, so sagacious, so witty, and so precise in thought and in the choice of words to express those thoughts. I had spent a most delightful morning, away from the turmoil of the hour, in the presence of a representative of the past, of one capable of comparing from his own experience the thoughts of almost the beginning and end of our centennial period. After bidding him good-by I talked, a little while, with members of his family. As I had been led to respect him by what I had previously known of him as a physician and a man, and as I saw him on his bed of helplessness, so I was led to hold him in still higher honor when I learned the following facts: He began to be blind in 1870, and he had been totally blind for more than two years. In 1873 he had a slight hemiplegia, and though previously able to walk about under the guidance of an attendant, he had, since that time, been wholly confined to his bed. And he was becoming still more helpless every year. He made no complaints, though he said jokingly to Dr. Storer a few months since, ‘To live till one is ninety is not what it is cracked up to be.’ He never gave any expression of unhappiness in the presence of others. He had some one to read to him daily, and thus had not allowed his mind to become dull, morose, or stupid by feeding upon its own lot. In fact, as one of his family expressed herself very graphically and charmingly, ‘his deportment is so sweet and gentle on all occasions that his friends almost forget that he is so helpless and so permanent an invalid. He sleeps often in the day, and quietly like a child at night.’ I asked what he said of his thoughts of a hereafter. The reply was: ‘He rarely speaks upon the subject, and dislikes to talk of theological doctrines, even of Christianity. But his faith in God is unbounded. He says, “I believe; help thou my unbelief.” He believes in and hopes for immortal life.’”

At the conclusion of Dr. Bowditch’s remarks the resolutions were unanimously adopted, and the society then adjourned.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL
OBSERVATION.

A. M. SUMNER, M. D., SECRETARY.

MAY 6, 1878. *Chest Expansion in Pleurisy.*—DR. CALVIN ELLIS showed an instrument for testing the expansion of the chest which proved the fallacy of the non-expansion theory in cases of pleurisy with effusion. He said that in observing a certain number of cases the diminution of motion so generally described was not seen. But for the purpose of measuring the exact amount of expansion, he arranged an apparatus which showed upon a scale the relative expansion of various parts of the chest. The application of this in a case of pleurisy, where the effusion rose as high as the second rib, gave the following results: In the axillary region, about midway, over the pectoral muscles and under the clavicles, on both sides the expansion was the same. With the aid of this, or some similar instrument, in a sufficient number of cases, the exact amount of movement could be easily ascertained.

DR. BOWDITCH asked if he had ever tried the instrument on the lower angle of the scapula, because, from what he had seen in cases of pleurisy with large effusion, there seemed to be a decided difference between the expansion of the two sides at this point.

DR. ELLIS stated that he did not apply it there in the present case, as the patient was lying on his back in bed.

DR. BOWDITCH spoke of a case he had seen with Dr. J. G. Blake. The patient, a male, had come from one of the New York hospitals, where he had been told that there was fluid in his chest, but the physicians did not approve of tapping. He had been sick for some months, and the fluid seemed to be in small quantity, the flatness being below the angle of the scapula. Dr. Bowditch did not examine in reference to the pleuritic line, which is one of the most striking diagnostic points in pleurisy. There was fine crepitation in various parts of the lung, front and back; very little expectoration, with great dyspnœa. He considered it a case of inflammatory action of a chronic character, the lung as well as the pleura being involved. The chest was tapped May 3d, between the eighth and ninth ribs below the angle of the scapula, where crepitus could be heard. Three pints of fluid were drawn off, with great relief, and there has been no return of the fluid. Dr. Bowditch spoke of another case, where there was gurgling and what seemed to be a cavity. The chest was tapped, and a quantity of pus was withdrawn, with relief. Dr. Bowditch wished to lay particular stress on the importance of tapping in that class of cases in which oftentimes one would think that he was pushing the needle into the lung instead of fluid, but in these cases there have always been the dead flatness of pleuritic effusion, orthopnœa, and perhaps other severe general symptoms.

DR. TARBELL wished to ask Dr. Ellis if, in the case he spoke of, he believed, by other evidence than the instrument, that the affected side expanded as much as the well one. He asked this question on account of the many inaccuracies which might creep into the investigation on account of the patient's back not

being supported, or by too great pressure by the patient on the instrument. He stated that he was not a believer in the immobility of the chest in pleurisy.

DR. ELLIS replied that he had other evidence. He considered it very important that the patient's back should be kept immovable by support. He first arranged an ordinary syringe in such a manner that the expansion of the chest acted upon a column of water, and showed upon a scale the amount of variation. He then tried two india-rubber bulbs, like those of the Davidson's syringe, without any effect upon the column of water; this failure was found to be owing to the fact that the ovoid bulbs changed their form under pressure without a change of capacity. And, finally, the apparatus shown was found to be the most efficient.

Typhoid Fever. — The regular reader for the evening, DR. C. E. STEDMAN, then read a paper entitled *One Hundred and Fifty Cases of Typhoid Fever*, which is reserved for publication.

DR. H. W. WILLIAMS spoke of patients' distaste for alcohol, on the recovery from typhoid fever, having taken large quantities during the illness. He mentioned a case that came under his observation, where the patient had been in the habit of taking half a bottle of brandy a day for a long time without any unpleasant effects, but on recovery not even a drachm could be borne.

DR. STEDMAN, in reply to Dr. Ingalls, said that the youngest patient that had come under his care last summer sick with typhoid fever was two years old. Small children almost always did well. In the list of cases which he had just read, all children recovered, except one, who died from perforation of the gall-bladder.

DR. BOWDITCH wished to ask about the case reported where death ensued from rupture of the gall-bladder, and yet the case was set down as typhoid fever. At the autopsy, were the characteristic lesions due to typhoid fever found?

DR. STEDMAN replied that they were not, except some enlargement of Peyer's patches, but that there was elevated temperature.

DR. BOWDITCH remarked that rupture of the gall-bladder in typhoid fever was of very rare occurrence.

DR. STEDMAN said that all the other members of the same family were brought into the hospital sick with typhoid fever, and so he classed this case as one.

Ten Cases of Melancholia. — DR. J. B. AYER read a paper entitled *Ten Typical Cases of Melancholia*.

Nine were seen at the McLean Asylum and one in private practice. All were married men. Insanity manifested itself at a late period in these cases, — it appeared between the ages of thirty-one and sixty-two. Four of the cases were between fifty and sixty. Five had out-of-door pursuits, and five were sedentary in their habits and business. All were industrious when well. In most of the cases the invasion was gradual. The exciting causes were, in order of frequency: (1.) Worry lest accounts were not kept properly. (2.) Loss of property. (3.) Partial sunstroke. (4.) Overwork in counting-room. (5.) Inability to find employment. (6.) Inability to work on account of failing eyesight. (7.) Worry on account of wife's drunkenness.

In five of the cases there was hereditary tendency, and the patients had previously been more or less peculiar. In six cases out of eight the symptoms appeared between May 1st and September 1st.

Three were suicidal or homicidal cases, and three of the others were suspected. Probably hallucinations and delusions existed in every case, but the patients rarely revealed them. Occasionally, when thrown off their guard, they would admit that they were guided by voices which directed them to do penance, abstain from food, etc. One patient who was pressed very hard to tell why he would not eat without compulsion, although he was very hungry, finally said, "It's God's food; I must not eat it." These patients were invariably worse in the morning. As far as I know, all their attempts at suicide or homicide were made early in the day, sometimes on waking out of a sound sleep. Two of the patients have apparently recovered, and have attended to business for upwards of a year. In two there were relapses. One, who was removed from the asylum after five months there, continued to improve for a while, but in four months became dull, despondent, and irritable again, and was returned. He is now improving. The other patient was taken ill in 1864, and recovered in twenty-one months. He attended to business, and was considered well for ten and a half years, then became suddenly depressed, was brought back to the asylum, and died a year later in an attack of angina pectoris. With one remarkable exception the cases of long standing became gradually demented, the physical condition at the same time often improving. The patient referred to is a typical case of melancholia; but while avoiding companionship he reads incessantly, is thoroughly well informed, and retains full possession of his faculties. A recent contributor to the *British Medical Journal* asserts that the "insane lose the power of weeping, and only with returning reason can unloose the fountain of their tears." This is entirely opposed to my experience. Three of the cases mentioned have frequently shed tears, although at the time their prospect of recovery was extremely small.

As to treatment, tonics were always indicated, generally citrate of quinine and iron with lime; frequently dilute phosphoric acid, twenty or thirty minims, or Horsford's acid phosphate, from half a drachm to a drachm, was added to each dose, with doubtful benefit. It was often necessary to add fluid extract of rhubarb or fluid extract of senna to each dose of the tonic.

In cases of subacute melancholia, where the patient was not in a condition of stupor, morphia in doses of one sixth to one third of a grain thrice daily, and a double dose at bedtime, for months often acted as a nervous tonic without manifesting to any great degree the usual disagreeable effects. For excitement combined with sleeplessness, chloral with bromide of potash, of each ten to twenty grains every hour and a half to two hours, worked well. Except when cerebral congestion existed, bromide of potash did not benefit. Dr. Jelly states that bromide of potash given to patients suffering from melancholia for a length of time often has a very injurious and depressing effect. When patients began to improve they would still remain restless at night. It was necessary to change the sedatives, or to give them in new combination. Hyoseyamus often did well for a few nights. In one convalescent case a bottle of lager at bedtime was better than medicine. The patients were required to take sufficient food. The danger from inanition was seen to be so great that they were compelled to take three full meals daily, and at times they were fed through the stomach tube. I made repeated efforts to get them interested in matters apart from themselves. It was hard to make them ride or walk outside the hospital grounds. They did not wish to see relatives or friends, and took no pleasure in social entertainments. I induced one patient—a professional gardener—to try light work in the garden, but after working a couple of hours he declined to do more.

Another said he had been fond of sawing wood; so I took him to the wood-pile and invited him to work. In a few moments he laid down his saw, and said that he had had enough. As he was a farmer we next tried to interest him in cattle, etc., but without success.

Only one of the cases was treated outside of the asylum. He was advised to enter, but his friends refused. It was then recommended that he should buy a farm and become a farmer. This experiment was carried out, and was completely successful. In three or four months he seemed entirely well. Still it was a somewhat dangerous course to try, as he had shown symptoms of a suicidal tendency.

SAYRE'S CONSPECTUS OF ORGANIC MATERIA MEDICA
AND PHARMACAL BOTANY.¹

THIS book might be considered a desirable abridgment of the now classical Pharmacographia of Flückiger and Hanbury, and of certain portions of the United States Dispensatory, were it better done. The plan is good, and the information in most cases correct, but the author, in his zeal to save the time of the student of medicine or pharmacy, has apparently saved a good deal of his own, which should have been devoted to making his sentences intelligible, to say nothing of their being in good English. The compound of hasty abbreviation, bad spelling (for example, Pettinkofer, Troemner, watermellon, microphyle, etc., etc.), bad Latin, and worse English is simply abominable.

The definitions in the botanical portion are far from satisfactory. For example, "Albumen. The flowery [query floury?] part [of the seed]." As to the table of antidotes, many persons might well prefer to take their chance with the poisons than with the antidotes, as they are there given, promiscuously, without the slightest attempt, even in the order in which they are mentioned, to indicate the reason or occasion for their use.

To conclude, the book is well meant, but should be almost entirely rewritten before it is fit to be placed in the hands of students.

MAYS ON THE THERAPEUTIC FORCES.²

WE fear that this little book only adds another to the numerous unsuccessful attempts to establish general laws in therapeutics. The author supposes that the action of "chemical stimulants," alcohol, cod-liver oil, phosphorus, and oxygen, consists in their generating force by their chemical affinity for oxygen, or (in the case of oxygen itself) for oxidizable substances, while the "mechanical," quinia and other bitters, iodine, opium, irritants, and cold, are thought to excite molecular motion by friction. The latter part of the theory is too theoretical to be either affirmed or denied upon any experimental basis.

As to the first part, the author seems to have fallen into the somewhat seductive error of supposing that because various forms of force are exactly correlated they are interchangeable at will, and that heat may, if necessary, become vital or nervous force. In fact, we know very well that there may be in the body an abundance, or indeed a superabundance, of heat, and yet the vital forces may be at a very low ebb.

The time for extreme generalization in therapeutics has not yet come, but we would by no means deprecate on this account any thoughtful attempt like the present to solve the problem. Though many a theory will be set up and

¹ *Sayre's Conspectus of Organic Materia Medica and Pharmacal Botany.* Comprising the Vegetable and Animal Drugs, their Physical Character, Geographical Origin, Classification, Constituents, Doses, Adulterations, etc. Table of the Tests and Solubilities of the Alkaloids appended. By L. E. SAYRE, Ph. G. Philadelphia: D. G. Brinton, 115 South Seventh Street. 1879

² *Mays on the Therapeutic Forces.* By THOMAS T. MAYS, M. D. Philadelphia: Lindsay and Blakiston. 1879.

fall to the ground before the Newton of therapeutics shall write its *Principia*, yet the framing of these theories, as well as their refutation, can hardly fail to be of mental profit both to the philosophic writer and the critical reader.

MUIR'S PRACTICAL CHEMISTRY.¹

THIS is a small pocket manual upon qualitative analysis, and gives but a very few of the tests with which it is necessary for the medical student to be familiar. The little material which it does contain is very badly arranged, and can be found much better stated in the ordinary text-books on qualitative analysis. Moreover, we do not agree with the author in considering that a medical student needs only to know a few tests for the simple salts. W.

QUARANTINE IN YELLOW FEVER.

DR. S. OAKLEY VANDERPOEL, health officer of New York, has just made his annual report to the quarantine commissioners, and much of it is naturally devoted to the subject of yellow fever. While he does not believe that the most absolute cleanliness will prevent an epidemic of the disease if the germ is deposited under favorable conditions of heat and moisture, he expresses the opinion that its type and persistence will depend upon the amount and character of the filth it finds to favor its propagation. During the year 1878 forty-five cases of infectious disease were in the lower bay and at the hospital, and of these thirty were yellow fever. There were fourteen deaths, and from June 9th until September 30th there was not an interval of three days without there being one or more cases of yellow fever in the bay. Dr. Vanderpoel is fully alive to the evils incidental to the presence of the disease, but at the same time he is not willing to admit that they furnish an excuse for those stupid measures—born of panic and ignorance—which would impose absolute restriction and bring trade and commerce to a stand-still. “A resort to such measures,” he says, “would be a poor commentary upon the progress of medical studies and hygiene during the century. If at one swoop we are to blot out the favorable experience of this port, and be relegated to the non-intercourse which characterized some of the monasteries during the epidemics of the Middle Ages, it would be an unfortunate blow to the vast commercial interests which connect us with the tropics.” He condemns the kind of quarantine maintained at New Orleans, which he says ignores the elementary principles which govern such institutions in other places. Two chief points must be taken into consideration: first, the incubation period of the disease, and, second, its mode or manner of transmission; and if these are properly recognized, he holds that a quarantine at New Orleans can be made as effective as at New York.

But, after all, Dr. Vanderpoel believes that the best way to deal with yel-

¹ *Practical Chemistry for Medical Students.* By M. M. PATTISON MUIR, F. R. S. E., Prælector in Chemistry, Gonville and Caius College, Cambridge. London: Macmillan & Co. 1878.

low fever is to check its development and spread at the fountain-head, and he therefore devotes a great portion of his report to the consideration of the hygienic condition of Havana, and accompanies it with the letter which he addressed to President Hayes on the subject during the recent epidemic in the South. After dwelling upon the very bad sanitary state of Havana, he shows that, on account of its peculiar location, vessels in its port are compelled to lie in the focus of all the impurities and stifling exhalations of the city, and that they are consequently specially liable to become infected while there. The practical result of a consideration of these facts is the admirable proposition which he makes, that the government of Spain be solicited to unite with that of the United States in the appointment of an international commission, which shall proceed to Havana with a view to examine the sanitary surroundings of that city and their relations to the propagation of the scourge, and that the Spanish government be earnestly requested to carry out fully the joint recommendations of such commission.

MEDICAL NOTES.

— The experts authorized by Congress to investigate the epidemic of yellow fever submitted their report on January 30th. They acknowledge their investigations, owing to lack of time, to be incomplete, and advise that two or three skilled experts be charged with a completion of the task, and that at least two be authorized to study the disease at its home in the West Indies, and that the coöperation of other governments should be obtained in this work. In regard to future quarantine, two classes of officers are suggested, one for foreign and one for home service: the former making themselves familiar with all diseases prevalent at the ports at which they are stationed, and with the medical history of ships trading to or from their respective ports; the latter to have charge of quarantine stations, and to supervise interstate travel and traffic from infected places in time of epidemics. To carry into effect an efficient system of quarantine, a central health department and an advisory board of health are advised to frame needful laws. The board looks upon the disease as an exotic in all countries except the West Indies, and in all of them its introduction can be traced either directly or indirectly to the West Indies.

— In regard to the recent reports of the plague in Russia an English exchange of the date of January 18th states that they originated from an outbreak of typhus brought by a returning body of Cossacks into the province of Astrachan. Late in December, following a sudden thaw, a fatal outbreak occurred, carrying off one hundred and forty-six people out of a total population of six hundred. A panic seized the people, which seems to have affected the government, and quarantine regulations have been strictly enforced. In spite, however, of these reports the term plague continues to be used.

— The conflicting theories in regard to the death of Barron, the cashier of the Dexter Bank, who was found handcuffed and gagged, with a cord twisted about his throat, in a dying condition, in the vault of the bank, brings into a strong

light the importance of a post-mortem examination in inquests of such importance as the one held in this case. The theory now set up by the detectives, nearly a year after the occurrence, is death from suicide by morphine poisoning. The report of the physician showed that there were marks of external violence, and a general condition which one might interpret as that of concussion of the brain. The man who for a year has been held up as a hero is now charged with grave crimes. An examination could have definitely settled whether the injuries were such as to have caused death, and had sufficient evidence not been found to sustain the theory such facts would have led to an examination of the contents of the stomach, and the poisoning theory have been definitely determined.

— In our allusion last week to the comparative age of the *Medical Press and Circular*, — which claimed to be *second* in age among medical journals in the English tongue, — there was an error as to the age of the *American Journal of the Medical Sciences*. In its present form that journal was first issued in 1827, or about three months before the first issue of this journal. The order, then, is as follows: *London Lancet* born 1823; *American Journal of the Medical Sciences*, latter part of 1827; *Boston Medical and Surgical Journal*, February, 1828; *Medical Press and Circular*, 1837.

— The Vienna correspondent of the *British Medical Journal* says: —

“This session our American cousins still show their anxiety to keep pace with the front rank in medicine. We believe they number sixty or more. From Britain we notice a few: from Ireland, three; a dozen or more from Scotland; and but few from England. Thus many of the more private classes are almost purely composed of English speakers. We have heard many American gentlemen say they would prefer studying in England if only London could afford the facilities of Vienna in proximity of various classes and their convenience in choice as to hours; further, it has been said that very many more would study in London than here, because the German language is so difficult, and the expenses so high in Vienna. Among the students here are three ladies, one American and two Russian.

“Apropos of woman's sphere, it is certainly considered more than usually extensive here than in some places; for all sorts of nurse-work and dressing, even in the syphilitic wards, seems delegated to women, who remove dressings before the students in a business-like manner, rather startling to one who has never seen the like beforehand.”

— Mr. Siebold, of London, referring to the popular impression that only green wall papers are to be feared, says that out of sixty to seventy wall papers — blues, reds, browns, pinks, etc. — analyzed by himself, ten only were harmless; the remainder contained arsenic.

— The possibility of true bony union in fractured patella being denied by many surgeons, the following will be read with interest: Mr. W. I. Wheeler exhibited at the Pathological Society of Dublin a specimen of fracture of the patella in which true bony union had taken place. The patient was a man aged twenty-one years, driver of a milk-cart. In September, 1875, he had been admitted to the City of Dublin Hospital, suffering from a transverse fracture of the patella; the fragments of bone were separated by an interval

of two inches and three eighths. He was treated by the application of ice, Mr. Wheeler's pads, and a starched bandage. When he left the hospital, on December 13th, there was no separation between the fragments. He subsequently resumed his occupation, and got up and down over the wheel of a milk-cart two hundred and forty times a week. Symptoms of phthisis set in, and finally he succumbed to that disease. During life there was no perceptible diminution in the volume of the quadriceps muscle, the movements of the patella were not impaired, and there were no spasms of the quadriceps.

— Upon the occasion of a recent concert at the Cincinnati Music Hall by Wilhelmj and the orchestra, the programmes were bordered with black, as a mourning tribute to the late Dr. Landon Longworth, who was a professor in the College of Music.

— Professor Gorup-Besanez, author of a large manual on Physiological Chemistry, recently died at Erlangen.

— The *British Medical Journal* for December 14th, contains the following: "M. Dumontpallier (Société de Biologie, *Le Progrès médical*, December 7, 1878) related some experiments with reference to sensation made on students at the hospital of La Pitié, which are particularly interesting in connection with the recent lectures of M. Charcot, Professor Gamgee, and Dr. Hughes Bennett, in our columns, on the subject of modifications of sensation in hysterical and other forms of anæsthesia. Ether was sprayed on the right arm; sensibility disappeared little by little in the parts in contact with the ether. At the same time, sensibility notably diminished in the corresponding area of the left arm. These phenomena are absolutely identical with those which are observed in hysterical women, and nevertheless, we are assured, the young men on whom M. Dumontpallier operated were not hysterical. One of his externes, who underwent the ether-spray operation, has prepared an account of his experiences, which M. Dumontpallier submitted to the society. M. Dumontpallier added that it was true that some other experiments had not produced any positive results. M. Laborde declared that the phenomenon of transference was scarcely evidence of the reality of the facts adduced, and recommended M. Dumontpallier to experiment upon himself. Perhaps, in some pathological conditions, subcutaneous injections of atropin might modify symmetrical hyperæsthesia. M. Dumontpallier, in reply to M. Malassez, said he did not believe in the phenomena brought forward, until he saw the thermometer rising at the moment when return of sensation commenced."

NEW YORK.

— Another new medical journal is shortly to make its appearance. It is to be a bi-monthly, published by the Putnams, and it is stated that a high order of excellence will be aimed at by those conducting it. The chief editor is Dr. E. C. Seguin, and he will be assisted by Drs. T. A. McBride, L. A. Stimson, and M. D. Mann. With the exception of Dr. Stimson, who is professor of pathological anatomy in the medical department of the University of New York, all the editors are identified with the College of Physicians and Surgeons. The title of the journal is to be the *Archives of Medicine*, and its first number is announced to appear in February. It is a continuation of the

Archives of Scientific and Practical Medicine, formerly edited by the same gentleman in conjunction with Dr. Brown-Séquard, and of the American Clinical Lectures.

— At the trial of a certain "Dr. Baker" for giving a false certificate as to the cause of the death of a young woman upon whom one "Dr. Bradford" produced an abortion which resulted fatally (for which the latter was sentenced to state's-prison for fifteen years), the counsel for the defendant requested that his client be tried by a jury of physicians, his only "peers" in a medical case like this. The judge, however, decided that a common-law jury would be perfectly competent to try the case, and in giving this opinion rather naively added that he did not believe that twelve physicians could be found who would agree on anything.

— The number of cases of scarlet fever reported in New York last week was 184. Of diphtheria in the same time there were 64 cases. The week before the total number of cases of scarlet fever reported was 216, and of diphtheria 54. At the health department it was said that these diseases were diminishing in tenement districts, and increasing in first-class private houses.

PHILADELPHIA.

— Professor William Goodell presented an interesting paper, at a recent meeting of the County Medical Society, upon vegetations of the endometrium, the term including a variety of small growths developing upon the mucous membrane, and leading to congestion and menorrhagia. Of these, he described: (1.) *Fungous Degeneration of the Endometrium (endometritis hyperplastica)*, a non-malignant condition, for which he recommended the curette, with subsequent applications of tincture of iodine. In long-standing cases, a repetition of the operation is sometimes required, and nitric acid may be substituted for the iodine. (2.) *Villous Degeneration of the Endometrium* is not much unlike the preceding variety, except that the growths are more like pieces of boiled tapioca or fragments of brain than ordinary granulations. Submitted to examination by different microscopists, they were variously pronounced *villous cancer*, *papilloma*, *cystic papillary adenoma*, and a similar case in Dresden was considered by Hirschfeld to be a *cylinder-celled adenoma*. Cases have also been reported by Drs. Lusk of New York, Breinig of Pennsylvania, and Matthews Duncan. The prognosis should be a guarded one; but life may be prolonged by frequent removal of the growths. (3.) *Sarcomatous Degeneration of the Endometrium* the writer declared to be more malignant than epithelial cancer. "Irregular and profuse menstruation, and intermenstrual leucorrhœa gradually becoming more and more fetid, are the first symptoms," which are afterwards accompanied by the usual signs of enlargement of the uterus and by pains. The tumor may partly protrude from the os. Its diffuse growth, the absence of capsule, its friability and placental-like structure to the touch, and later its excessive factor, stamp it with an almost unquestionable microscopic individuality. The treatment consists in removal and cauterization, but the prognosis is very unfavorable; though the fatal termination, according to the author, might be greatly postponed by operative measures such as described.

— At the last meeting of the Academy of Natural Sciences, Dr. Leidy called attention to a mass of living hair worms of the genus *gordius*. There were upwards of sixty individuals, tangled up into a ball, from the surface of which the heads waved about like the snakes on the head of the fabled Medusa. In the mass were seven males, which could be distinguished by their lighter color and other peculiarities. The species was thought to be *gordius robustus*, although the different species of *gordius* required further study before being definitely distinguished.

Dr. Leidy also called attention to the liver of a rat containing numerous cysts, in which were imbedded cysticerci, or immature tape-worms. Numerous specimens of the mature worms were also found infesting rats, few of those examined being free from them. The larval forms were provided with strong hook-like appendages, but the mature worms were comparatively inoffensive looking, the heads being unprovided with hooks like the *tenia mediocanellata* of the human subject. The specimens exhibited had been received from Dr. Coues, of the army, and were all obtained from specimens captured in Carroll County, Mo.

The secretary announced that at the next meeting of the academy Dr. H. C. Chapman would report the results of his study of the chimpanzee which lately died at the Zoölogical Garden. His remarks will be illustrated by photographs, drawings, and dissections of the animal itself.

The director of the microscopical section, Dr. Kenderdine, exhibited a new pattern of sub-stage for the microscope, just brought out by the ingenious optician, Mr. Zentmayer, of this city, which, it seemed to him, combine features of excellence commending it to the notice of working microscopists.

— Mrs. Hannah Green, better known as "Granny Green," who was the oldest inmate of the Home of the Little Sisters of the Poor, in this city, died at that institution on Wednesday; it is believed that she was in the one hundred and fifteenth year of her age. For the past thirty years Mrs. Green had been dependent on the charity of kind friends, who, when the Home of the Little Sisters of the Poor was opened, about nine years ago, had her placed therein; an unmarried daughter, with whom she had lived up to that time, and who was then sixty-five years old, being unable through failing health to provide for her own wants, much less assist her more aged relative. In her habits "Granny Green" was always temperate, objecting to taking wine or liquor of any kind, even medicinally. She was formerly fond of smoking the pipe, but recently gave up its use. She ate and slept well, and conversed freely and intelligently, delighting in the company of visitors, though entirely blind, and confined to her bed for several years past. Not much is known concerning Mrs. Green's antecedents, or when she first came to this country, but it is pretty well authenticated that she was born in the county of Donegal, Ireland, in 1764.

— The new state hospital for the southeastern district of Pennsylvania now building near Norristown, is to be provided with electric call bells and telephones.

— Dr. J. Milner Fothergill, of London, has been elected an associate member of the Philadelphia College of Physicians.

LETTER FROM LONDON.

SEWERAGE SYSTEMS.

MR. EDITOR, — In his most interesting centennial discourse at Philadelphia, in 1876, Dr. Bowditch published the results obtained from a kind of sanitary census which he had taken prior to writing his address; and one of the points to which he called attention was the question of the disposal of sewage in the principal towns of the United States. To judge by the answers he received to his inquiries, the sewage question appears to be for the most part in a very undeveloped and one may almost say in a chaotic state in America. In England we are only at the beginning of the great struggle between health and sewage disposal; but it is fair to ourselves to say that for some years past we have been making strenuous efforts to better our position, and that we may shortly expect to see some great result from the improvements which have been, or which are about to be, introduced in the methods of dealing with our sewage. The question, so far as it concerns this country, is one of comparatively recent date, for it is only within the last forty years that any attempt has been made to do away with the primitive cess-pool system, except, perhaps, in London and one or two of the larger provincial towns, where a few rough and ill-arranged brick drains had been in use for a longer period. In 1847 an act of Parliament was passed, making it compulsory in London to connect house drains with the public sewers, and at the same time considerable efforts were made to improve the condition of these sewers, and to make them capable of bearing the new strain which was put upon them. No attempt, however, was yet made to connect the drains of the town into one great system, and for some years they remained split up into a number of independent units, the main channel resulting from each of these being carried down to the nearest point in the Thames, and its contents emptied into the river. It was not many years before the state of the river was such as to be perfectly intolerable. The water became black and stinking; no fish could live in it; the health of the inhabitants of those parts of the town which bordered the river suffered severely from the tainted atmosphere; and it was felt by such sanitary authorities as at that time existed that it was of little use to attempt to improve the general state of the metropolis whilst it was traversed by a river which had now become no better than an immense open sewer. Public opinion at length was so awakened to the existing evils that in 1858, eleven years after the power of the legislature was first called into play on the subject, an act was passed through Parliament authorizing the authorities of the town to construct a vast and complete system of sewers, by which the sewage of the whole of London should be collected into two channels, one on each side of the Thames, and should be carried down the river some miles away from London, to be turned into the stream at high tide, with a view to its being carried out to sea with the ebb. These works were completed after several years of great labor, and the Metropolitan Main-Drainage System constitutes at the present day probably the greatest engineering work of the kind in existence.

The impetus given to the development of systematic drainage in large towns

by the construction of the main-drainage works in London produced its effect all over the country, with the result that, as time passed on, one after another of the large towns of the kingdom was provided with a similar system, until at length the great majority were more or less efficiently sewered. But now arose a fresh difficulty. Comparatively few of these towns were situated like London, within a few miles of the mouth of a tidal river, and many of them had been built upon the banks of streams which passed through the centre of other large towns before reaching the sea, perhaps constituting the sole source of their water supply. It was not long before loud complaints were heard from these lower towns that their river was polluted with all kinds of excrementitious and manufacturing refuse before reaching them; that the mere presence of the stream was an offense to the town; and that it was quite out of the question to think of using the water for drinking. The position of London, though enabling her to get rid of her own refuse with as little annoyance as possible to other people, was just such as to make her the more liable to suffer at the hands of her neighbors, and being the biggest town in the kingdom, and the seat of the legislature, she was the first to make her voice heard in the matter; which she did so effectually that in 1866 she succeeded in passing a bill through Parliament which enacted that from that time no fresh outfalls for sewage into the Thames should be constructed above the metropolis, and that those towns which were already using the river for this purpose should within a reasonable time either cease to do so, or should render the sewage harmless before allowing it to flow into the stream.

This act, however, only applied to the Thames, and it was ten years before the legislation was extended to the whole country. In 1876 an act was passed called the Rivers Pollution Act, of which a short summary was given in your journal for April 11, 1878, the purpose of which was practically to make general the injunction hitherto restricted to the Thames, and to prevent the country from employing its rivers as places for the indiscriminate disposal of its refuse.

It is this act which has done more than anything else to stimulate improvement in the matter of the disposal of sewage, and which is in fact producing a complete revolution in the whole question. So few towns are altogether sinless as regards river pollution that the force of the act is almost universally felt, and all over the country experiments are being tried and systems are being carried out with a view in some places simply to the epuration of the sewage, and in others to its simultaneous epuration and utilization.

Speaking roughly, there are five different ways in which it has been attempted to dispose of sewage with safety. Four of these deal with sewage which has been removed by the ordinary method of water-carriage; in the fifth the excreta are collected in cess-pools, pails, or other receptacles which can be frequently emptied, and their contents sold to farmers for agricultural purposes.

Of the four methods applicable to the water-carriage system, the first subjects the sewage water to filtration through charcoal, gravel, or other porous substances, with the view of separating the solids prior to discharging it into the river. In the second method the same object is attained by passing the sewer

water into large tanks, where it is allowed to stand and to deposit its solids before flowing into the stream. In the third method the sewage is subjected to some form of chemical procedure to precipitate some of the material held in solution; whilst in the fourth the main principle consists in spreading the waters by carefully prepared systems of irrigation over farm lands, the purification being entrusted to the natural action of vegetable growth in conjunction with the assimilative power of soils for all kinds of organic and inorganic materials. Of these processes it is obvious at the outset that the methods of purification by simple filtration or deposition must be wholly inadequate to satisfy the requirements of the Rivers Pollution Act. It is equally obvious that the pail and irrigation schemes, if properly carried out, must settle the difficulty so far as the rivers are concerned; and with these systems the questions to be settled are whether they are practicable on a large scale, and whether they can be employed without producing other evils, which from the sanitary point of view may be almost as serious as those of river pollution. The efficiency of chemical processes in purifying sewage is a question that can only be settled by experience, and as a considerable number of such processes have been fully tested in this country it may be said that we are now in a position to speak definitely on this subject.

I will say a few words to begin with on the cess-pool or pail system. This is the plan adopted in a very large number of towns in the United Kingdom, but it must not be supposed that all of these towns have adopted it with a definite view to sanitary requirements. On the contrary, with very many of them the fact that they collect their excreta in cess-pools simply means that they have not yet arrived at that degree of sanitary enlightenment which is indicated by the construction of a distinct system of sewers, and hence that they are only prevented by their incapacity and general carelessness from offending in the matter of river pollution. In towns where this is the case the state of things is, as a rule, so horribly filthy and unhealthy that legislation is quite as necessary for them as for towns which turn their sewage untreated straight into the rivers; the only difference between the two cases being that in the latter the law has to be directed against manslaughter, whilst in the former its aim must be to prevent suicide. There is, however, a considerable number of towns, including some of our largest provincial towns, where a system of this nature has been adopted after the most careful consideration, and where the greatest care is taken to render its action efficient.

There is one great advantage which all systems of this kind have over those which are based upon water-carriage. In all towns the sewage question presents three problems: the first relates to the collection of the sewage; the second to its conveyance; and the third to its disposal. In most of our large towns the second problem is already definitely disposed of, but the first still remains a question which is almost as pressing and important as the third. All the systems dependent upon water-carriage deal only with the third problem, leaving the first wholly untouched. The cess-pool or pail system, on the contrary, deals at the same time with both of these questions, and in settling what is to be done with the excreta disposes of the problem of collection. In large manufacturing towns, where the great bulk of the population belongs to

the lower class of society, and where, consequently, it can scarcely be hoped to get the water-closet system carried out decently and healthily, some such arrangements as those which have been carried out in the poorer districts of certain of our towns will probably be found to be very efficacious and satisfactory. Various plans of this description have been followed in different towns. Thus at Hull with one hundred and thirty thousand inhabitants, and at Glasgow with about five hundred thousand, one of the methods adopted, amongst others, is to allow the privies to empty themselves into small, carefully made cess-pits, which serve also as the receptacles for ashes, the addition of the ashes being intended to deodorize the excreta, and at the same time to keep the cess-pits dry, and so prevent the evils resulting from possible leakage. The whole arrangement is under careful inspection, and the pits are emptied at short intervals by scavengers. In other places the pail system is employed. As its name implies, this system consists in placing movable receptacles under the privy seats, which are changed at stated periods by the town authorities. In some places these pails are supplied with a disinfectant; in others they are lined with a specially prepared, dry, absorbent material; whilst in others, again, ashes are used in the way described above. Some of our largest towns are largely dealt with by the pail system, as, for instance, Manchester, which with its suburb, Latford, has nearly half a million inhabitants; Birmingham with nearly four hundred thousand; Leeds with three hundred thousand; Edinburgh with about two hundred thousand; Nottingham with over one hundred thousand; and Rochdale with seventy thousand. In most of these towns the greatest vigilance is exercised in seeing that the whole arrangement is thoroughly carried out, and the results are found to be most satisfactory. As a rule, the town authorities have established large depots to which the contents of the receptacles are carried, and in which they are manufactured into a form of manure which can be carried away by the farmers without trouble or annoyance, to the surrounding districts.

I must not close this part of my subject without referring to the earth closets, which, however, have never made any great way in this country as a means of dealing with the excreta of large numbers of people. For lunatic asylums, work-houses, barracks, or small villages they have been found to be very serviceable, but they will probably never extend much further. The difficulty and expense attendant upon the preparation and distribution of the dry earth requisite for the proper carrying out of this system would be so great in the case of very large communities that this alone would be sufficient to stand in the way of its general adoption.

In my next letter I shall treat of the disposal of water-carried sewage in this country.

SHORT COMMUNICATIONS.

THE SANITARY PROTECTION ASSOCIATION OF NEWPORT, R. I.

THE objects of this association, based upon that recently found so successful at Edinburgh, and the first of the kind, so far as known, yet established in this country, are, briefly stated, threefold: First, to provide its members, at moderate cost, with such advice and supervision as shall insure the proper sanitary condition of their own dwellings. Second, to enable members to procure practical advice, on moderate terms, as to the best means of remedying defects in houses of the poorer class, in which they may be interested. Third, to aid in improving the sanitary condition of the city.

The first inspection does not cause any disturbance to household arrangements. It is followed by a report making specific recommendations, if any improvements are thought necessary. The members are not bound to carry out these recommendations. The subsequent annual inspection will, so long as the sanitary arrangements remain in working order, entail no expense beyond the annual subscription.

Each member is entitled to the following privileges in respect of property within the municipality of Newport: (1.) An immediate report by the inspecting engineer of the association on the sanitary condition of one dwelling or property, with specific recommendations, if necessary, as to the improvement of drainage, water supply, and ventilation, and a report upon the water by the analyst. (2.) An annual inspection of his premises, with a report as to their sanitary condition. (3.) Occasional supplementary inspection and advice concerning the dwelling or property in respect of which he is a subscriber. (4.) Each member by his annual payment secures the above privileges in respect of one dwelling or property occupied or designated by him. Should he be interested in two or more dwellings or properties, as owner or occupant, he may secure equal privileges in respect to them all by paying the annual subscription for each. (5.) A report, to be obtainable on payment of a special fee, on any dwelling or property, or plans thereof, which he may wish to hire or purchase. (6.) Reports by the officers of the association as to the sanitary condition of any dwellings or properties of the very poor, on payment of a moderate fee. (7.) A report, without fee, upon the sanitary condition of any public building, as church, school-house, or place of public resort, within the city of Newport.

The officers of the association are prominent men. Dr. Horatio R. Storer is the corresponding secretary, and Col. George E. Waring, Jr., is the consulting engineer.

THE METRIC SYSTEM.

MR. EDITOR, — On page 72 (January 9th), in note on Metric System, permit me to criticise.

It begins: "Mi. or gr. i. equals," etc., implying that a minim equals a grain, a fluid drachm equals a drachm, etc. In fact, of course, there is a difference of about five per cent. in favor of the former.

I would suggest that the last two lines of the note be amended so as to read as follows: —

"F $\overline{3}$ used for $\overline{3}$ (of water) makes a difference of five per cent. (excess). CC. used for Gms. (of water) makes no difference in the result. A teaspoonful is 5 CC.; it is 5 Gms. in the case of liquids of the specific gravity of water only."

Without disrespect to the writer of the note, I think that we may justly say that in his efforts to abbreviate he has written incorrectly.

W. H. LATHROP, M. D.

STATE ALMS HOUSE, TEWKSBURY.

THE METRIC SYSTEM IN MEDICINE.

OLD STYLE.		METRIC.	
		Gms.	
mi. or gr. i. equals	.	.	06
f $\overline{3}$ i. or $\overline{3}$ i. equals	.	4	
f $\overline{3}$ i. or $\overline{3}$ i. equals	.	32	

The decimal line instead of *points* makes errors impossible.

As .06 (Drug) is less than a grain, while 4. and 32. (Vehicle) are more than the drachm and ounce, there is no danger of giving too large doses of strong drugs.

C. C. used for Gms. causes an error of 5 per cent. [excess].

A teaspoon is 5 Gms. ; a tablespoon, 20 Gms.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 25, 1879.

Cities.	Popula- tion. Estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from				
				The Prin- cipal "Zymo- tic" Diseases.	Pneumo- nia.	Diphtheria and Croup.	Scarlet Fe- ver.	Diarrheal Diseases.
New York	1,085,000	639	30.38	20.81	13.44	5.01	9.39	1.09
Philadelphia	—	324	—	—	—	3.09	1.85	—
Brooklyn	564,400	292	24.13	16.78	15.27	7.64	4.58	0.39
St. Louis	—	185	—	11.11	18.62	3.54	—	0.44
Chicago	—	141	—	12.07	12.07	7.80	—	—
Baltimore	365,000	159	22.71	11.32	13.20	8.11	1.26	—
Boston	356,500	158	23.12	19.62	8.86	10.13	6.96	1.27
Cincinnati	—	101	—	17.92	6.93	2.97	10.89	0.99
District of Columbia	160,000	90	32.18	9.09	15.16	3.33	3.33	1.11
Pittsburgh	—	—	—	—	—	—	—	—
Milwaukee	—	36	—	25.00	5.55	8.33	—	2.78
Providence	—	48	—	25.00	29.17	12.50	10.42	—
New Haven	—	24	—	20.83	20.83	—	—	—
Charleston	—	26	—	—	8.85	—	—	—
Worcester	52,500	17	16.88	11.76	23.63	—	—	—
Cambridge	51,400	13	13.18	15.38	15.39	7.69	7.69	—
Fall River	48,500	25	26.88	20.00	12.00	12.00	—	—
Lawrence	38,200	15	20.48	13.33	—	13.33	—	—
Lynn	34,000	11	16.87	9.09	9.09	—	—	—
Springfield	31,500	12	19.86	8.33	16.67	8.33	—	—
New Bedford	27,000	—	—	—	—	—	—	—
Salem	26,400	6	11.85	16.67	50.00	—	—	—
Somerville	23,350	4	8.93	75.00	—	25.00	50.00	—
Chelsea	20,800	6	15.04	16.67	33.33	16.67	—	—
Taunton	20,200	12	30.97	—	8.83	—	—	—
Holyoke	18,200	7	20.06	23.57	—	28.57	—	—
Gloucester	17,100	4	12.20	—	25.00	—	—	—
Newton	17,100	4	12.20	—	25.00	—	—	—
Haverhill	15,300	5	17.04	40.00	20.00	40.00	—	—
Newburyport	13,500	3	11.59	—	66.67	—	—	—
Fitchburg	12,500	2	8.84	—	—	—	—	—

Two thousand two hundred and ninety-eight deaths were reported: 355 from consumption, 270 from pneumonia, 113 from scarlet fever, 96 from diphtheria, 80 from bronchitis, 47 from croup, 37 from whooping-cough, 34 from typhoid fever, 14 from diarrhoea and dysentery, 10 from erysipelas, and nine from cerebro-spinal meningitis. None from small-pox or measles.

From *bronchitis* 39 deaths were reported in New York, 11 in Brooklyn and Chicago, five in Cincinnati, four in St. Louis and District of Columbia, two in Milwaukee, one in Providence, New Haven, Charleston, and Worcester. From *whooping-cough*, 23 in New York, seven in Brooklyn, two in Milwaukee, one in St. Louis, Baltimore, Cincinnati, District of Columbia, and Providence. From *typhoid fever*, 11 in Philadelphia, five in New York, four in Chicago, two in St. Louis, Baltimore, Boston, Cincinnati, and Fall River, one in District of Columbia, Milwaukee, Lynn, and Salem. From *erysipelas*, four in New York, three in Brooklyn and St. Louis. From *cerebro-spinal meningitis*, two in New York, Chicago, Milwaukee, Worcester, and Somerville, one in Brooklyn. The returns from seventeen of the nineteen cities in Massachusetts, with a population of 799,050, show an increasing mortality from scarlet fever and typhoid fever; from diarrhoea about the same, and less from the other zymotic diseases. Typhoid fever is the most prevalent of the zymotic diseases in Philadelphia. In the District of Columbia the death-rate for whites was 27.47; blacks and colored, 41.41. Diphtheria is markedly abating in Providence and Milwaukee; scarlet fever increasing in Providence. Pneumonia is very prevalent in San Francisco. Diphtheria and scarlet fever were very prevalent in Buffalo in December.

Sergeant Purcell's meteorological record for the week, in Boston, is as follows:—

Date.	Barom-eter.	Thermom-eter.		Relative Humidity.			Direction of Wind.			Velocity of Wind.			State of Weather.			Rainfall. (Melted Snow.)			
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Daily Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in Inches.
Jan. 19	29.79	24	36	16	76	51	74	67	W	SE	N	9	3	4	C	C	H	—	—
" 20	29.75	11	26	8	80	52	70	89	N	NW	NW	18	13	16	O	O	C	3.10	.03
" 21	29.97	11	23	0	73	51	82	68	W	W	S	1	9	7	C	F	S	4.15	.01
" 22	29.95	33	42	16	79	45	73	67	SW	W	S	13	14	4	O	O	H	1.00	.02
" 23	29.97	39	41	24	89	70	64	74	SE	W	NW	8	16	15	O	O	C	—	—
" 24	30.12	34	43	19	73	19	61	51	SW	SW	S	1	16	15	F	C	O	—	—
" 25	29.55	39	52	27	63	39	45	49	SW	SW	W	8	10	31	C	C	C	.30	.01

Weekly Summary.	Barometer.	Thermometer.	Humidity, Saturation being 100.	Wind.	Rain.
	Mean 29.876	Mean 27.4	Mean 63.8	Total miles traveled, 1647.	Total amt. .07 in.
	Max. 30.309	Max. 52	Max. 89	Prevailing direction, W.	Duration, 8 hrs. 55 min.
	Min. 29.456	Min. 0	Min. 19		
	Range 0.853	Range 52	Range 70		

Barometer corrected for temperature, elevation, and instrumental error.

Explanation of weather symbols: O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., snow; L. S., light snow; T., threatening.

Station: Latitude 42° 21'; longitude 71° 4'; height of instrument above the sea, 77.5.

The death-rate for the week ending January 11th for the twenty large English towns, with a population of 7,383,999, was 27.1, a decrease of two per 1000 from the previous week: for London 27, Dublin 44.9, Manchester 35.2, Liverpool 32.4, Glasgow 28, Edinburgh 23. Scarlet fever and diseases of the respiratory organs are most prevalent. Small-pox remained about the same in London, somewhat increased in Dublin.

From the vigorous measures taken by the Russian government to prevent the spread of the plague, which has since December been the cause of great mortality in a few of the southern towns of that empire, and from the general adoption by the other governments of Europe of the best means of disinfection by fire, internal quarantine, etc., in case the disease appears farther west, it is confidently hoped that a wide-spread epidemic may be avoided. The greatly improved sanitary condition of the cities and towns of Western Europe has been apparently the chief ground for such a hope.

BOOKS AND PAMPHLETS RECEIVED. — An Analysis of Seventy-Five Cases of "Writer's Cramp" and Impaired Writing Power. By George Vivian Poore, F. R. C. P. (Medico-Chirurgical Transactions.) London. 1878.

Transactions of the American Ophthalmological Society. New York. 1878. Published by the Society.

Physiology. By Prof. James T. Whittaker, A. M., M. D. Illustrated. Cincinnati: C. R. Murray. 1879. For sale by Robert Clarke & Co., 65 West Fourth St., Cincinnati.

Rhode Island Twenty-Fifth Registration Report. 1877.

Placenta Prævia. By G. M. B. Maughs, M. D., Professor of Obstetrics and Diseases of Women, St. Louis Medical College. 1879.

Report on Neurotics. Therapeutical Society of New York. (Reprint.)

Thirty-First Annual Report of the Trustees of the Massachusetts School for Idiotic and Feeble-Minded Youth at South Boston. 1879.

A Case of Ovariectomy (Successful). By Edward Borek, M. D. (St. Louis Medical and Surgical Journal.)

Lecture Notes on Chemical Physiology and Pathology. By Victor C. Vaughn, M. D., Ph. D. Ann Arbor. 1879.

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LECTURES.

CLINICAL LECTURES ON THE PHYSIOLOGICAL PATHOLOGY OF SYPHILIS.¹

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK,
SESSION OF 1878-79.

BY FESSENDEN N. OTIS, M. D.,

Clinical Professor of Genito-Urinary Diseases, etc.

GENTLEMEN, — In entering to-day upon the systematic clinical study of syphilis, it will be worth our while to review briefly the teachings in regard to its history and nature, as presented to you somewhat in detail on a previous occasion. By citations from our most valued authorities it was made plain that the disease was of very ancient origin, antedating the Christian era by many centuries. It was made equally evident that while syphilis had been the subject of much and careful study during a long period, great differences of opinion existed in regard to its nature and the manner in which it affected the human organism. By the earliest writers accepted as a punishment inflicted upon the human race through some offended mythological deity, it was treated by prayers and sacrifices. But as the medical profession grew more observant and less superstitious, it came to be considered the result of a venereal miasm, which might be modified, possibly cured, by medical measures. The miasmatic doctrine in its turn gave way to farther observation and closer study of the matter, until we found, at about the middle of the sixteenth century, that contact with a person suffering from syphilis was held to be essential for the acquirement of this disease. From this fact it was assumed that a mysterious contagious element resided in the secretions of the syphilitic lesions, and thus the doctrine of a *virus* was first established. These lesions were, however, often so complicated with certain simple venereal diseases that a very long period elapsed before the separation was effected. Even now it can scarcely be said that syphilis has been absolutely separated from the local disease called the chancre. This matter, as you know, has been much discussed, for the last quarter of a century, under

¹ Reported by P. Brynberg Porter, M. D.

the title of the unity or duality of syphilis. A vast amount of clinical evidence has been adduced in favor of each: one party claiming that syphilis is the only parent of chancre, — the local venereal ulcer, — and that, while the latter is *usually* a local disease, it may under certain circumstances acquire the power of communicating syphilis: the opposing party denying that power under all circumstances, and asserting the individual and unchangeable nature of each. Notwithstanding the profusion of clinical evidence always available in these discussions, this important question still figures as the “tug of war” in all general syphilitic discussions. It may be well at this point to call your attention to the fact that clinical observations, which have been thus far almost solely relied upon for the solution of the disputed questions in regard to venereal diseases, are, as a rule, made under such peculiar embarrassments — moral, mental, physical, and circumstantial — that the same apparent conditions falling under the notice of one observer often present phases and peculiarities in the experience of another that warrant entirely different conclusions. Hence it is that notwithstanding syphilitic disease has been studied by numerous earnest, honest, and competent observers, wide and sincere differences of opinion still exist in matters of great practical importance, aside from unity and duality. Thus, as has been seen, in regard to immediate and gradual infection in syphilis, the profession are still about equally divided: one side claiming that the virus of syphilis infects the entire system at the moment of inoculation, while the other claims that the initial lesion is purely local for a time, and that the organism is gradually affected.

Also in regard to the question of hereditary influence: one party claiming that syphilis may be communicated to the embryo through the spermatozoon furnished by a syphilitic father; the other holding, by virtue of an equal amount of clinical evidence, that this is never the case, but that the male parent can only infect his offspring through the medium of the maternal influence, that is to say, by first infecting the mother.

Nor is it alone in regard to such points of doctrine as have been cited that unsettled questions confront the student of syphilitic disease. Deductions from clinical observations continue to give us the most varied and discordant views and opinions, even in regard to the nature of the disease and its mode of affecting the system. Thus among those figuring in the history of syphilis, previously narrated, we may recall the views of the more modern authorities. Erasmus Wilson,¹ in 1832, gave it as his opinion that when the poison of syphilis is once admitted into the system, it has a tendency to accumulate until the entire system is saturated with it. As soon as this point is

¹ Page 7.

reached, he says, "an outburst of fever occurs, which results in the elimination of the excess of the collected poison." Acton,¹ in 1860, in regard to syphilitic infection, rejects this and all other attempts at explanation. He says, in so many words: "Clinical observation teaches only the facts, the *modus operandi* remains undiscovered; the real explanation of the matter we do not know."

Virehow,² Vidal, Billroth, and Sigmund each give us different opinions based upon clinical observation, no one of which sheds any new light upon the practical features of the disease. Lancereaux, in 1869, expressed the opinion that "syphilis affects the system like alcohol, contained in the blood and acting upon the net-work of organs, in which it occasions at the same time with hyperæmia the development of the elements of new formation." As regards the manner of absorption of the virus, he says "it is a matter that ill bears discussion." Mr. Hutchinson, of London, in 1871, gave it as his opinion — the result of a large clinical experience — that syphilis was a "specific fever, like small-pox, measles, and scarlet fever. . . . Like them," says Mr. Hutchinson, "it has its stage of incubation, efflorescence, relapse, and decline, . . . but that the stages are more protracted; instead of counting its duration by days we have to count by weeks or months."

We shall find it difficult to believe, however, that Mr. Hutchinson now attaches much importance to this alleged similarity between the specific eruptive fevers and syphilis when we recall, in the great discussion before the Hunterian Society of London in 1874, the announcement of his conviction that "*mercury* is the true vital and physiological antidote of the syphilitic virus."

It is true at this time that, through clinical observations, syphilis has come now to be appreciated in its varied manifestations, — that each of its lesions has been accurately studied and described; but clinical research has never solved the problem of its nature, or mode of development, or explained the connection between the different lesions and stages of syphilis. It has elucidated no mystery, nor led to any philosophical mode of treatment. Thus to-day, while recognized in its physical appearances, in its pathological results, while successfully combated in its protean developments, its position in medical literature is without scientific basis. It is yet unconnected with any ascertained physiological or pathological laws; explanations of its nature are but unsupported and contradictory opinions; methods of treatment purely experimental or empirical.

Hitherto we have studied but the external evidences of the disease, each manifestation presenting as a distinct and unexplained problem,

¹ Acton. London Edition, 1860, pages 279 and 342.

² Otis. Physiology of Syphilitic Infection, pages 8 and 9. New York Journal of Syphilography and Dermatology, July, 1871.

and have treated it by medicines and by measures which experience and experiment have shown to be "good for syphilis." The advances in physiological science, the immense strides in knowledge of histology and pathology by means of the microscope during the last twenty years, have given insight into the causes of disease which clinical observation alone could never have effected. The discovery by Beale of the active principle of the cattle plague, small-pox, the vaccine, etc., — *the living animal disease germ*, — led to the inference that a similar living principle constituted the virus of syphilis, and this Beale claimed in 1866. Verson and Beisiadecki, in 1869, were the first, by careful microscopical examinations, to recognize a peculiar and excessive accumulation of lymph or white blood cells as the first effect of the syphilitic process, and as a cause of the induration of the initial lesion. This matter seems to me so important in establishing a starting-point for the physiological explanation of syphilis, in its various phases, that I shall quote entire the results of Beisiadecki's observations on this point, as published in the Archives of the Academy of Sciences of Vienna in 1867. He says: "I have studied the Hunterian chancre in twenty specimens. The *induration* consists in a cell infiltration of the papillæ of the corium and subcutaneous connective tissue. The infiltrated cells are similar to those of dermatitis. They are round, have one or two nuclei, have a finely granular protoplasm, and separate the connective tissue equally. These fibres retain the normal size, are not infiltrated as in dermatitis; they are apparently denser and more resistant to chemical reagents. But the arrangement of the cells differs from that in dermatitis. In those places where a rich cell proliferation has taken place, and in their vicinity still more, we find that the neighboring tissue of the vessels, as well as of their walls, are abundantly infiltrated with cells. The walls of the capillary vessels of the papillæ are thickened, have a shining and rigid appearance, and *inclose numerous nuclei which project even into the lumen of the vessels*. The adventitia of the arteries and veins is three times its normal thickness, *in consequence of the presence of numerous round, spindle-shaped, and branched cells*. The calibre of the vessels is diminished, but the vessels are permeable. If the induration still increases we find in its vicinity *an abundant proliferation in the adventitia of the vessels, and subsequently the adjoining connective tissue cells enlarge and proliferate*, and anastomose with those situated in the adventitia by means of their processes.¹ . . . The induration is explained" (however, he further remarks) "neither by the number of cells nor by their peculiar properties, but by the fact that while in *dermatitis* we have a proliferation of cells, and also a serous exudation which infiltrates the tissue cells and fibres, in the *induration* of syphilis we have a dry, anæmic tissue, resistant connect-

¹ Italics my own.

ive tissue fibres, considerably thickened walls of vessels. The dryness of the induration, which produces the hardness and also the anæmia, is caused by the *proliferation in the walls of the vessels*, which makes it difficult for the serum to leave the vessels, and also diminishes their calibre. And this," he says, "explains why the syphilitic induration breaks down into a molecular mass, and why resorption takes place so slowly. *This investigation*," says Beisiadecki, "*might give us a clue to the mode in which the organism is infected.*"

"In consequence of experiments on animals and man, we came to the conclusion that the blood capillaries are surrounded by perivascular spaces, and that the adventitia of the blood-vessels is in part to be regarded as belonging to the lymphatic system. We have seen that the cells of the adventitia are in a condition of proliferation; that this proliferation is in the walls of vessels distant from the induration. We also know that when the induration continues, the larger lymphatic vessels appear as thick cords on the dorsum penis, and that the corresponding glands take part in the process. These cells, formed in the lymphatic system, can easily enter the lymph current and the blood, and become the carrier of the contagium." From this he concludes that "*the infection of the organism is not caused by absorption of fluid or broken-down substances in an unknown way, but the progressing inflammation of the lymphatics and glands, the formation of cells in them, and the entrance of these cells into the lymph current as living elements may be regarded as the cause of the general infection.*"

Here, then, we have claimed, as a result of scientific investigation, the localized and abnormal proliferation and accumulation of germinal cells at the point of a syphilitic inoculation. If we are willing to accept the conclusions of Beale, that the germ of syphilis is a degraded human germinal cell, capable of uniting with the normal human germinal elements and modifying their nature and behavior, we shall find a reasonable cause for this excessive localized cell accumulation. Beale says that this disease germ is a living amœboid cell, possessing, like the white corpuscle of the blood, the vital movement, and a like power of multiplication; "it is a molecule of living matter, derived by direct descent from the living matter of man's organism, — living matter which retains its life after the death of the organism in which it was produced; living matter which has descended from the living matter of health, but which has acquired the property of retaining its life under new conditions; living matter destroyed with difficulty, and possessing such wonderful energy that it will grow and multiply when removed from its seat of development and transferred to another situation, provided only that it be furnished with suitable nutrient pabulum."¹

¹ Disease Germs, their Nature and Origin, Lionel Beale, M. B., F. R. S., London, 1872, page 143, etc.

When it comes to be remembered that, through its degradation, the disease germ may be reduced in size even to $\frac{1}{100,000}$ of an inch or less in diameter, while its powers of movement and proliferation are still retained, and that the normal white blood corpuscle is only $\frac{1}{300}$ of an inch in diameter, it will be readily seen that this disease germ might easily, through contact, become incorporated with the white corpuscle, and proliferate in its substance; again, with increased rapidity, proliferating *with it*, be carried *by it* through the natural physiological channels; thus finding its way to the most distant points of the human economy, to develop or deteriorate in accordance with the effect produced by the introduction of this degraded element into its substance.

Thus far, through microscopical examinations, we have seen the apparent effect of the syphilitic element in producing an excessive proliferation of cells at the point of inoculation. Verson, Beisiadecki, and Auspitz have recognized a local result of this in an obstruction of the vessels of nutrition of the part, and this producing an anæmic condition which finally results in a molecular necrosis of the indurated tissue.

Now this we observe as a clinical fact. Here, for instance, is a young man, Case I., who had a suspicious venereal connection about five weeks ago. He represents himself as having been in perfect health at the time. On the morning after the connection he noticed a slight abrasion just behind the fossæ glandis. This, however, healed without treatment during the next twenty-four hours. A week since, on the site of that abrasion, he found a little bunch about the size of a pea, but without tenderness. His general health was still perfect.

We have here, apparently, a classical initial lesion of syphilis, as determined by clinical observation. I would be glad to have you come forward and examine the physical characteristics of this lesion. You observe that, pressed between your thumb and finger, the papule is hard, almost like a nodule of cartilage; also that it is movable under the skin. Its color is deeper than the surrounding tissue. There is no tenderness, but as you make tense the tissue over it, thus, you observe that the papule shows a pale yellow color. Now let us examine the evidences which point to syphilis in this case. First, it has followed a suspicious venereal connection. The patient claims that this was his first and only connection, and this was five weeks since; second, that the abrasion consequent upon it immediately healed. We know as a clinical fact that the wound of an artificial inoculation of pure syphilitic material, such as may be found in the blood in active syphilis or the secretion of a mucous patch in the mouth, heals promptly, as if no such inoculation had taken place; third, that nearly four weeks after the healing of the abrasion, a hard nodule was found

on its site. This period or interval of apparent rest, between the inoculation and recognition of an induration at that point, is a well-ascertained clinical fact in the history of syphilis, and is known as the *period of incubation*. There is nothing to account for this nodule except an abnormal cell accumulation, and no apparent cause, inflammatory or otherwise, for this accumulation, except the local *proliferation* of cells. If not caused by the syphilitic influence, as claimed by Beale and confirmed by Verson, Auspitz, and Beisiadecki, we have no explanation of it. These cells, according to the same authorities, are formed in the lymph spaces, the connection of which with the lymph vessels would, if accepting their views, lead us to look for further evidences of the disease in the line of the lymphatic system rather than in the blood vascular system.¹

The nutritive fluids exuded by the blood-vessels into the tissues are said to be in constant movement, and that too in a direction towards the lymphatic vessels, through which the excess over and above the necessities of growth and repair is carried back into the general blood current through the subclavian veins. This tissue-fluid, or lymph current, then, would serve to carry the germ of syphilitic disease from the surface of inoculation towards and into a lymphatic, the nearest lymphatic vessel. Movement through the lymph spaces is said to be retarded by a coagulation of the tissue fluid from slight irritations, while this retardation is most favorable to cell proliferation. Here, then, we find sufficient reason for detention of the infective process at the point of inoculation for a period greater or less. In the many instances of short incubation, or interval between the date of inoculation and the occurrence of characteristic gland enlargement, which I have seen, in the very great majority of cases the initial lesion has been near the frænum preputialis; a point where, according to modern histologists,² lymphatic vessels come nearest to the surface. In a case quoted in my article on the Physiology of Syphilitic Infection, published in the *Journal of Syphilography* in July, 1871, it was shown that the syphilitic inoculation was through a punctured wound of the finger, and that axillary enlargement followed within twenty-four hours, and general constitutional infection within six weeks, from that time.

We have, then, a so-called period of incubation of about three weeks, in the presenting case. This is claimed as the result of extended clinical observation to be about the average, although cases are recorded of intervals as brief as twenty-four hours, and as long as seventy days. Once a characteristic induration is observed, however, it is rare not to find lymphatic glands in nearest connection with it also

¹ Sudoriparous and Lymphatic Systems, by Robert Willis, London, 1867. The Lymphatic System, by Professor Recklinghausen. Streeker's Human and Comparative Histology, Sydenham Ed., vol. i., page 267.

² Ballicff, etc.

indurated and enlarged. Examination in this case shows this enlargement to have occurred. Here we find them in both inguinal regions, as large as a buckshot, hard, movable, and insensitive; as I press upon them the patient makes no sign or expression of pain. Recent painless gland enlargement is strong clinical evidence of the presence of syphilis; taken, as here, in connection with an indurated nodule, appearing three to four weeks after a suspicious venereal connection, renders it exceedingly probable that the trouble is syphilitic. This view is also confirmed by the possibility of accounting for this physical manifestation through the view of abnormal cell proliferation set up by a syphilitic disease germ.

CASE II. This case, which you may designate as W. G., presents another form of local lesion, also on the reflection of the mucous membrane of the prepuce, where, by the way, venereal accidents are most common. His history is as follows: First, an impure connection, or rather several, occurring during a period of three or four weeks. Naturally dating from the last, he states that three or four days after he noticed an abrasion which he supposed to be a simple chafe. In this opinion a medical gentleman whom he consulted coincided, and gave him an astringent lotion to apply. The trouble, however, slowly increased. The lesion was cauterized without benefit, and has since been treated with various lotions. Here you see a raw surface, about the size of a three-cent piece, lying, as the touch at once reveals, on an indurated base. There is no apparent loss of tissue; on the contrary, the part is elevated above the healthy surrounding structure. There is no evidence of suppurative action. The scanty secretion which moistens the surface of this lesion is serous rather than purulent, showing, under the microscope, chiefly epithelial scales, instead of pus corpuscles. This is evidently an initial lesion of syphilis, differing from the former case in that the cell infiltration has here involved the more superficial layers of its covering, no longer movable over the induration, but broken down from what Beisiadecki has called *anæmia* of the tissue, but which Virchow has called a *necrobiosis*.

Here, also, we find enlarged and indurated inguinal glands on either side, and also a distinctly knotted cord, movable under the finger, about the size of a goose quill, running back from the induration, just underneath the integument of the dorsum penis, until it is lost in the tissues near the right crus penis. This is an enlarged and indurated lymphatic vessel, evidently connecting the initial induration with the nearest lymphatic gland. It is not unfrequently found if carefully looked for, and would seem to clear up any possible doubt as to the mode of connection between the trouble at the point of inoculation and the inguinal gland enlargements, and shows that these gland enlargements are not caused by any reaction from a general

constitutional infection, but are evidences of cell accumulation from appreciable causes, and through recognizable physiological channels. At our next session I hope to be able to present other forms of the initial lesion of syphilis, and to show, as in the two cases brought before you to-day, that variations in form are chiefly due to differences in the locality and extent of cell accumulation; to show also that syphilis is, *per se*, neither inflammatory nor destructive, but consists primarily in a process of cell growth and accumulation, and thus quite opposed in its nature and action to the venereal lesion called the chancre.

TRAUMATIC ANEURISM THE RESULT OF A RUPTURE OF ONE OF THE RIGHT LUMBAR ARTERIES.

BY A. C. HEFFINGER, M. D., UNITED STATES NAVY.

H. D., seaman, United States navy, native of Boston, Mass., aged thirty-eight. Previous naval service twelve years, during which he enjoyed uniformly good health. Family history good. On June 17, 1878, he received a blow upon the right side, between the ribs and the crest of the ilium, from the handle of a hose cart, while running with it through the navy yard. He was at once thrown into a state of shock, in which he remained six hours. Reaction was cautiously brought about by stimulants; as soon, however, as it set in he had a hæmorrhage from the rectum, passing two hundred and fifty C. C. of uncoagulated blood. Peritonitis ensued on the following day, and was combated by hot fomentations and morphia. He was admitted to the Naval Hospital, Chelsea, Mass., June 27th, ten days after the accident. At that time the peritonitis had greatly subsided. An extensive ecchymosis was found over the right ilium. The bowels were constipated. His urine contained red blood and pus corpuscles in considerable amount, and some albuminous casts; specific gravity 1010. Hot fomentations and morphia were continued, and he was put upon a light, nutritious diet.

On the 28th he was seized with an attack of cramps in the lower part of his abdomen extending into both groins. This lasted about half an hour, when he suddenly became better, and in a few minutes passed 3.15 C. C. of bloody urine containing a clot three centimetres long and one centimetre thick. Three hours after this obstinate vomiting set in, and was relieved with much difficulty by creosote and brandy.

On the 29th he was seized with cramps in the same manner as on the previous day, and in ten minutes after the onset he passed by urethra two hundred and fifty C. C. of pure blood. Morphia and ergot were given hypodermically, and no more hæmorrhage ensued. From this time until July 2d the patient gradually improved, but on the

evening of the 2d he was again seized with abdominal cramps, and urinated with difficulty, small clots of blood passing out with the urine. A catheter was passed, and sixty C. C. of bloody urine were drawn off. After this the patient did well, blood gradually disappearing from the urine.

On the 6th the right lower extremity became œdematous, and only six hundred and twenty-five C. C. of urine were passed. The urine, however, gradually increased in amount, and became normal in character on the 16th.

On the 20th an examination of the right side showed that an area of dullness extended from the margin of the ribs to the crest of the ilium, and at the umbilicus five centimetres to the left of the median line. A slight protuberance was noticed to the right of the umbilicus. A tumor appeared to be occupying the entire right half of the abdominal cavity, and distending its walls. The right lower extremity still remained œdematous. It was the general opinion of the medical officers of the hospital that the patient had either a displaced liver, or an hepatic abscess. The persistent normal liver dullness above seemed to preclude the idea of much displacement. His treatment at this time was simply supporting. August 4th both lower extremities and the scrotum became œdematous. The extremities were bandaged and elevated. On August 8th his left knee was greatly swollen and painful. Much tenderness existed in the course of the left internal saphenous vein. Pulse 102; temperature 101° F.; respirations 21. There was much cough, and mucous râles were heard over both fronts. The urine was scanty, and the perspiration profuse. Pyæmia was suspected, and thirty grains of quinine were given every four hours.

The patient improved immediately, and in a few days the fever had entirely disappeared. The quinine, however, was continued in diminished doses for some time afterward. The patient's general health gradually improved, but the abdominal tumor continued to enlarge, and an abdominal supporter was applied on the 18th. Notwithstanding the supporter the pressure of the tumor on the lumbar plexus caused him much pain, and its interference with the digestive apparatus reduced him greatly. On September 3d he was very weak. Considerable percussion dullness was found over the antero-inferior portion of left lung. The right lower extremity, scrotum, and penis were very œdematous. The patient lay constantly on the right side; much pain was caused and a sense of suffocation when he lay on the left. His strength was maintained by stimulants and nutritious diet. After this he had repeated spasmodic attacks of pain in the right inguinal region extending into the corresponding thigh, which were relieved by morphia hypodermically. He continued to lose strength, and nutritious enemata were given him. There was little change in the patient's condition until Sep-

tember 27th, when œdema of the lungs and pericarditis set in. Under this combined attack the patient's condition was deplorable to the last degree. Much to the surprise of the medical staff, under anodynes and stimulants he began to improve. The œdema of the lungs became less distressing; pericardial effusion followed, and in a short time disappeared. The patient remained in this critical condition until October 13th, when the right upper extremity became œdematous, and the lungs comparatively free. Paroxysms of pain in the lumbar plexus occurred daily from this time on, and .18 gramme, and sometimes .210 gramme, of morphia was given at a dose, hypodermically, for their relief. Œdema of the lungs came on again October 27th, and the condition was most pitiable. Serous transudation into the bronchial tubes was so profuse that suffocation appeared imminent. The expectoration was frothy, and contained much blood; brandy was given by mouth and rectum. In a few hours he breathed more easily, and after a good night's rest, induced by morphia, was much improved. Bed-sores at this time began to trouble him. Several places over the sacrum were slightly excoriated, and a small ulcer existed over the right trochanter major. These were treated with glycerine and air-cushions, and made no farther progress. On November 5th he passed five C. C. of foetid pus per rectum, and he continued to pass about the same amount in every stool for several days. Œdema of the lungs became very much worse on the 11th, and was attended with severe pain in the lower part of the abdomen, occurring from two to three times in every twenty-four hours. He remained in this condition, too weak to change his position, and scarcely able to speak, till the morning of the 13th, when he became unconscious at six A. M., and remained so until he died, at nine A. M.

Sectio cadaveris, six hours after death. External appearance: the body was greatly emaciated; there was much œdema of the lower extremities, penis, and scrotum; marked suggillation of back of head and neck, and entire posterior region of trunk. The abdomen presented an extensive enlargement, reaching from the eighth right costal cartilage and rib to corresponding crest of ilium, and across at the umbilicus, five centimetres to left of median line. *Thoracic viscera*. The left pleural cavity contained nearly a litre and a half of clear albuminous fluid; no evidence of recent pleuritis. The right pleura was adherent throughout. The left lung was very œdematous, carnified in antero-inferior part, contained a small area of cicatricial consolidation in apex, and weighed a kilogramme. The right lung was not so œdematous as left; carnified in antero-inferior part, the upper half presenting a mass of cicatricial consolidation; it weighed six hectogrammes. The bronchial lymphatic glands were much enlarged. *Heart and great vessels*. The pericardium was closely adherent over its entire area. The heart was greatly enlarged, weighing six hectogrammes. The right auricle

was enlarged, but its walls remained of normal thickness. The right ventricle was enlarged; walls slightly thinned, having an average thickness of seven millimetres; both auricle and ventricle were filled with dark, clotted blood. Left auricle slightly hypertrophied. Left ventricle considerably enlarged and hypertrophied; average thickness twenty-two millimetres. The right semilunar valve of aorta was calcified at several points along its attached border. A slight softening, seven millimetres in length by four in width, was found on inner surface of aorta, just above the right semilunar valve. The other vessels were healthy.

Abdominal viscera. On opening the abdomen a large tumor presented itself, filling the entire right half of the abdominal cavity, — excepting a small portion at top, occupied by the liver, — and extending from two to two and one half centimetres over the vertebral column, from the first lumbar vertebra to promontory of sacrum. The intestinal canal was entirely upon the left side, except the ascending, descending, and three centimetres of the transverse colon, which was lying upon the tumor, and was much reduced in size from the pressure which had been exerted upon it by the tumor behind, and the liver and anterior abdominal wall in front. The head of the pancreas, though still attached to the duodenum, was almost entirely obliterated. The mesenteric glands were greatly enlarged. A chronic peritonitis had existed around the tumor, and about a litre of albuminous fluid was found in the peritoneal cavity. The tumor was firmly attached to the under surface of the liver, right side of abdominal wall, whole extent of right lumbar and part of corresponding pelvic and iliac fasciæ, and to the bodies and intervertebral discs of the four lower lumbar vertebræ. The liver was removed, and found diminished in size, pale, and weighed one and one half kilogrammes. Many of the hepatic veins were nearly obliterated, and the vena cava inferior was completely obstructed just below the liver by pressure from the tumor. Portal circulation intact. The stomach was discovered pushed to the extreme left hypochondriac region, the greater part being behind the spleen. The spleen was slightly enlarged, otherwise healthy. The stomach was much reduced in size, and its walls very thin in places, principally along the greater curvature. It contained sixty C. C. of bile and mucus. The small intestine was empty; the large intestine was much smaller than usual, and almost empty; an opening connecting it with the tumor was diligently sought for without success. The tumor was dissected from its attachments, and removed without rupture. It weighed eight kilogrammes. On being opened it was found to contain a mass of laminated fibrin; the upper layers were old and firm, the lower becoming less and less so, till at the base of the sac fresh clots were found. The sac weighed twenty-one hectogrammes. Average thickness of walls fifteen millimetres, except at base, where the thickness reached four centime-

tres. The aorta was partially included in left side of sac for five or six centimetres. Inferior vena cava was obliterated for ten centimetres. Dr. R. H. Fitz examined the sac, and found a horse-shoe kidney in the posterior portion of its wall, thirty-three centimetres long and seven wide at the large extremity. It had two pelves, one of which communicated with the cavity of the sac by several sieve-like orifices. There were two ureters included in the posterior wall, and much dilated. He found the vascular supply very irregular, but succeeded in tracing one of the right lumbar arteries, which was closed by a thrombus, into the sac. The obliterated inferior vena cava, though partially included in the posterior wall of the sac, did not communicate with it. As the lumbar artery was the only demonstrated communication with the sac, the aneurism probably resulted from a rupture of its walls. The channels of collateral circulation were carefully looked for; none, however, could be found before removal of the tumor, and the destruction of relations necessary in doing this rendered it impossible to trace them in the abdominal cavity afterward. The superficial veins were not enlarged.

RECENT PROGRESS IN FORENSIC MEDICINE.

BY F. W. DRAPER, M. D.

Cadaveric Phenomena. — Professor Hofmann, of Vienna, has recently published the results of his observations upon the phenomena presented by the dead body in their medico-legal relation.¹ Among the topics discussed are the following: —

He found that blood taken from a dead body with the precaution to prevent any access of air does not give in the spectrum two absorption bands of oxyhæmoglobin, but a single broad band only, corresponding to reduced hæmoglobin simply. This discovery was originally made by Professor Gwosdew, of Moscow, in examining the blood of persons dead by asphyxia, and he regarded it as diagnostic of that form of death. It has been shown, however, by other observers that the blood of every dead body presents the same spectroscopic characters provided it has not been exposed to the air. It would appear, therefore, that the tissues of the body take the oxygen from the blood in a few minutes after the lungs have ceased to act. The venous blood, then, contains only the reduced hæmoglobin. Hoppe-Seyler and Hofmann have confirmed this. But it has been shown that there are some exceptions to this condition in certain forms of death, such as carbonic oxide poisoning, death by cold or starvation, and death by the entrance of air into the veins; in these exceptional cases the blood retains its oxidized characters. But

¹ Vierteljahrschrift für Gerichtl. Med., xxv. and xxvi.; London Medical Record, November 15, 1878.

even under such extraordinary conditions the contrast in the character of the blood is probably only temporary; Hofmann observes that the blood has the power of consuming its own oxygen when there is no contact with organic tissues.

Hofmann also directs attention to the difficulty, amounting sometimes to an impossibility, of distinguishing cadaveric lividity from ecchymosis in the presence of putrefaction. As putrefaction advances, the cutaneous and subcutaneous tissues imbibe the liquefied blood and become reddened thereby, thus resembling ecchymosis; the more advanced the decomposition, the greater the similarity becomes. In contused parts the extravasated blood is liquefied and diffused like that of the sound tissues, thus increasing the difficulty of distinguishing sound from injured parts. In some cases extravasation from rupture of the vessels of the skin may result from simple hypostasis. If a dead body remain suspended a long time petechiæ may be found in the skin of the dependent parts, their situation being the chief guide by which they are distinguished from those produced in life.

Hofmann's article is concluded with some observations on putrefaction in its relation to the identification of the dead body. The difficulty of establishing identity because of the deformity produced by gaseous decomposition is especially illustrated in cases of drowning. Hofmann has practiced with success the following method for restoring the features so as to permit the recognition of the individual. His method is based on the fact that the green coloring matter of putrefaction is soluble in water. The head is opened in the usual way, the brain is removed, and deep incisions are made into the parietal and occipital regions; the head is then placed in cold, running spring water. In from twelve to twenty hours the green color has almost if not entirely disappeared, and the swollen appearance has been much reduced. The calvaria is then replaced and held by the scalp, which is drawn over it. The head is then plunged into a saturated solution of corrosive sublimate in alcohol, and by this any remaining color or emphysema is removed; the face resumes its natural form, the skin being of a grayish-white color from the action of the chloride.

A microscopic examination of the various tissues shows that putrefaction begins generally by a chemical change of the albuminous compounds, simulating in appearance the fatty degeneration of a living tissue. Hofmann remarks that this is an important fact to bear in mind in connection with degenerative changes of glandular organs like the kidneys and the liver as a result of pathological processes, the appearances being analogous. Hofmann remarks incidentally, in the course of his paper, that he has observed the movements of the spermatozoa in from eighty to one hundred hours after the man's death.

Sub-Pleural Ecchymoses in New-Born Children. — Pinard has re-

viewed this subject recently, and his observations may be summarized as follows :¹ —

(1.) Punctated sub-pleural and sub-pericardial ecchymoses may be found in infants who have died during labor, or even several moments after birth, from arrest of the circulation, as well as in those who have died from suffocation.

(2.) Ecchymotic stains may be found on the lungs, pericardium, and thymus gland of children who have died several hours or days after birth in consequence of the conditions to which they were subjected during their birth.

Death by Submersion. — MM. Bergeron and Montano have reached the following conclusions as the result of their experimental and anatomical observations on the subject of death by drowning :² —

(1.) The presence of a frothy foam, not only in the pharynx and the larynx, but also in the bronchi, is the constant sign of death by submersion, whether syncope or asphyxia predominated in the mode of dying, and whether the individual was free in his movements, or was thrown into the water after having been made insensible by opium or chloroform, or was partly suffocated, or was fettered in his action. This absolute constancy of the presence of foam, whatever the special condition in which submersion occurred, is, in the opinion of the authors, the single sure uniform sign proving death by drowning.

(2.) There is always a certain degree of congestion, and sometimes sub-pleural ecchymoses are seen ; but these ecchymoses, which give the lungs a spotted or speckled look, are unlike the punctate ecchymoses of suffocation. The sign given by Tardieu as characteristic of this latter form of death accordingly preserves its significance.

(3.) The intensity of the hyperæmia and the extent of the ecchymoses are always in proportion to the efforts of the animal while struggling against submersion. It is the same also with the human subject, as has been verified in all autopsies made by the authors at the morgue, in Paris, during the last ten years. This fact appears to the writers to have a medico-legal value of the highest degree ; it permits one at an autopsy to learn concerning what passed in the last moments of life, to know whether or not the individual struggled long and vigorously during the act of drowning.

Malformations of the Hymen in their Relation to Legal Medicine. — Dr. Delens has published the details of three cases illustrating this topic.³ The first case was that of a girl fifteen and a half years old who was the victim of several repeated assaults, was even afflicted with vulvitis and vaginitis, but yet not deflorated. The integrity of the hymen in

¹ London Medical Record, No. 38, 1878, page 357.

² Annales d'Hygiène publique et de Médecine légale, 2 Ser., Tome xlviii.

³ London Medical Record, August 15, 1878.

this instance was explained by its peculiar formation; it was thickened to at least one millimetre, and presented an opening, only one millimetre in diameter. It was as resistant as an imperforate hymen.

The two other cases were examples of biperforate hymen. In one of these the two openings were not more than two centimetres in diameter; in the other they were only seven or eight millimetres by three or four. In such cases the central firm band is an obstacle to defloration; and the smaller the opening the more difficult the rupture of the part.

The Lungs of New-Born Children.—Professor Giovanardi has published in a recent number of the *Rivista Sperimentale di Medicina Legale*¹ the details of some experiments designed to show the fallacy of some of the accepted tests of respiration in new-born children, and to suggest a method for reaching more reliable conclusions under such circumstances.

He remarks that in order to determine whether or not a child has been born living, we look for the required proofs in the color, volume, consistency, and external aspect of the lungs, in their absolute weight and the quantity of blood contained in the pulmonary vessels; but for the most certain proof the medical jurist relies on the results of the application of the hydrostatic test. But all the authorities on legal medicine agree in the following propositions: (1) That the fact that the lungs float does not necessarily prove that they have breathed; and (2) that the fact of their sinking in water does not indicate in all cases that the child has been born dead.

The floating of the lungs of a child who has not breathed may be due to (1) artificial inflation; (2) putrefaction; (3) emphysema; (4) congelation; (5) their preservation for some time in alcohol.

On the other hand, the sinking of lungs which have breathed may depend: (1) on a general sanguineous congestion of the pulmonary vessels; (2) on hepatization, or tuberculosis, or other deposits in the lungs; (3) on advanced putrefaction, with destruction of the air-cells; (4) on the act of boiling, or any cause which increases the density of the texture of the lungs.

In addition to these, the usually recognized conditions which modify the value of the hydrostatic test, Professor Giovanardi has discovered others which he deems important, namely, the effects produced by prolonged exposure in water on the lungs of new-born children who have breathed. He draws the following conclusions from his experiments:—

(1.) The lungs of a child who has breathed sink in water if they are allowed to remain eleven or twelve days immersed in that liquid.

(2.) When the entire body of a child who has breathed is placed in water, the chest being closed, the lungs will continue to float up to the

¹ Dublin Journal of Medical Science, November, 1878, page 415.

stage of their complete destruction by putrefaction; when the cavity of the chest is opened so that the water may have free access to the lungs, the latter will sink after fifteen or twenty days' immersion of the body.

(3.) In cases in which the body of a new-born child is found cut to pieces, the chest opened, and the lungs exposed, an expert must not infer that the child has not breathed because the lungs sink in water.

(4.) By drying the lungs one may determine whether the sinking in water is owing to the fact that respiration has not occurred. If the child has breathed and the lungs have been for several days immersed in water, the lungs, if dried artificially, will float; but if breathing has not occurred the lungs, if dried, will sink again.



PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

T. M. ROTCH, M. D., SECRETARY.

SEPTEMBER 28, 1878. The meeting was called to order at seven and one half P. M., the president, DR. C. D. HOMANS, in the chair. Fifty-six members were present. The records of the last meeting were read and accepted.

Tubercular Meningitis. — DR. F. H. DAVENPORT read a case of tubercular meningitis. The patient, a child two years of age, of a delicate constitution, presented an unusually interesting picture of tubercular disease from the fact of its being so typical in its course, with the exception of absence of any change in the fundus of the eye. The *tâches cérébrales* of Trousseau were most perfectly marked, but the points which the reader considered most worthy of notice was that the temperature was singularly uniform, standing at 100° F. almost without exception for fourteen days, while the pulse showed the most decided variations, ranging from 60 to 130. The stage of vomiting also was very short, occurring but three times in the course of the disease. By report of Dr. E. G. Cutler, who made the autopsy, there were minute ecchymoses of the size of the head of a pin on the anterior aspect of the abdomen, on the palms of the hands and the soles of the feet, and a few on the face. The anterior fontanelle was not entirely closed; the dura mater was not abnormal, only rather tense. The convolutions were flattened and broadened, dry and sticky. Along the course of the vessels, quite high up on the convexity of the brain, especially about the fissure of Sylvius, there were many small granulations, evidently tubercle. On the left side, near the commencement of the third frontal convolution, there was a mass the size of a split pea, which was caseous. The tubercles were not so numerous on the right convexity. There was also a mass at the posterior portion of the middle fossa. At the base of the brain there was a purulent infiltration of the pia mater over the valve of Vieussens, and there were numerous tubercles along the fissure of Sylvius of both the right and left sides. Both lateral ventricles were enormously distended with a clear serum, as were also the third and fourth, the

amount in all being fully two ounces. Nothing abnormal in substance of brain or centres. An examination of the thoracic and abdominal viscera showed the presence of a large number of tubercles in the lungs, uniformly scattered through the substance. The lungs presented no other lesion whatsoever. There were also a few tubercles on the pleura, and the spleen, though of normal size, was completely studded with them. There was a slight ulceration at the lower portion of the ileum, apparently of a tuberculous nature. There were a few tubercles in each kidney. Tubercles were found to be pretty well scattered through the liver. The mesenteric and bronchial glands were enlarged and caseous. The interesting feature in connection with the post-mortem examination was the fact that the lungs, with the exception of the tubercles, were perfectly normal, such a condition belonging to the rarities of pathology.

Elastic Ligature. — DR. WALTER ELA read a paper on the Elastic Ligature in Fistulous Tracks, which was published in the JOURNAL of January 23, 1879.

Thymol. — DR. CHARLES H. WILLIAMS read a paper on Thymol and some of its Advantages over Carbolic Acid. Some specimens were shown, and the method of preparation was explained, as well as some experiments on its clinical and antiseptic qualities. It was stated that thymol is soluble in about one part to one thousand parts of water, and that this is sufficient to prevent an infection of wounds, though a solution with small additions of alcohol and glycerine was preferred. A number of cases which Ranke reports from the clinic at Halle were referred to, and fifty-one cases, including some very unpromising ones, were all reported as doing well. The most noticeable results obtained were the small amount of secretion from the wounds, the rapidity of healing, and the thorough protection. The reader stated that thymol had been tried in a number of successful ovariectomies, and he had used it himself in an operation for cataract extraction, and in some lesser cases with very good results. Its advantages over carbolic acid were that it produced less secretion, and consequently gave the wound more rest, as the bandages had to be changed less frequently, thus allowing the healing process to go on more rapidly. It does not have any poisonous effect; does not irritate the skin or edges of the wound; requires no protective under it; does not cause anæsthesia, or desquamation of the operator's hands, or irritation of the air passages; has an agreeable odor; and does not injure the instruments immersed in it.

Rhizopods. — DR. EPHRAIM CUTTER read a paper on the so-called Asthmatos Ciliaris, a rhizopod which he had detected in the nasal secretions of a child one and one half years of age, and which he cured by the use of the nascent chloride of ammonium passively inhaled. Dr. J. N. Salisbury, of Ohio, had described the parasite in *Hallier's Zeitschrift*, Jena, January, 1873, as the cause of infusorial catarrh and asthma. Enlarged micrographic drawings of the parasites were projected by means of a lantern on a screen, and their morphology was described. The differential diagnosis from ciliated epithelium is as follows: First. The so-called rhizopods are not found in any catarrhal excretions excepting those of the contagious ones. Second. The feet or processes have been observed to draw into the body repeatedly, to fuse together, to vary in number from four to fifty, to vary in length from the diam-

eter of the body to thrice that diameter, while cilia of the epithelium are one eighth of the length of the body. Third. The gubernacular method of genesis is not characteristic of ciliated epithelium. Fourth. The processes arise from the periphery in scattered masses, while cilia of epithelium arise from a ridge. Fifth. The rocking and locomotive movements of the rhizopods are not characteristic of epithelial cells. Sixth. Strong chemical agents often fail to destroy movements of the cilia of epithelium, while the bland salicylic acid inhaled destroys the *asthmato ciliaris* almost immediately. Seventh. The *asthmato* has been seen to turn over twice in twenty minutes; the gubernaculum to crook like the letter W, and then like the letter V; next to straighten out at an angle of 135° with the body; afterwards the body moved 90° on its own axis, and the gubernaculum erected itself to the shape of a crozier. The reader presented six microphotographs of the *asthmato ciliaris*, taken from the nasal excretion.

DR. HUNT made the following remarks in regard to Dr. Cutter's paper: I found myself in condition this morning to investigate the characteristics of the discharge in coryza: the watery portion contains but few morphological elements; in the muco-purulent product of a forcible expulsive effort there was an abundance of pus corpuscles and ciliated epithelial cells; the latter were varied in shape, often approaching a spherical form from the failure of the pointed extremities; generally the vibrations of the ciliæ had ceased; when vibrating they would sometimes come in contact with the glass cover or other impediment; then the cell was moved. The nucleus of the cell was generally visible. I found all these characteristics of this discharge described in Ranke's *Physiologie*, page 457, third edition, Leipzig, 1857. I saw nothing like an infusorial growth, and I think from Dr. Cutter's description that he has seen no more than I have; he figures nothing more than can be observed in any case of muco-purulent inflammation of the Schneiderian membrane. It may seem unjust to doubt Dr. Cutter's opinion as to his observations, but I would submit that one who, referring to figures like those which the gentleman has shown this evening, demonstrates the evident ciliæ of the structures shown as "false feet" of rhizopods lays himself open to suspicion; the "false feet" which gave origin to the old name of "pseudopods" were amœboid processes, and have no relation to ciliæ. Since the figures exhibited show nucleated structures I would humbly suggest that this rarer characteristic of rhizopods should be represented in the nomenclature.

NOTE. I have had the pleasure of inspecting six photographs which Dr. Cutter has furnished as exhibiting proofs of the correctness of his observations. I find two taken with the one-fiftieth objective entirely worthless; they show nothing but a coarsely outlined object. Nos. 1 and 2, taken with a one-sixth objective, are from the same specimen, merely mounted differently; they furnish an indistinct picture of a spherical cell, with a long process, and a very indistinct clump of ciliæ; probably nothing definite as to structure can be demonstrated; surely no appearances that might not have been photographed from the muco-purulent discharge from the nose. No. 3 is quite like an ordinary healthy ciliated cell, and No. 4 is probably a poor picture of such a cell seen "end on." Dr. Cutter's diagnosis of rhizopods from ciliated epithelium is made by means of the following characteristics: First. Rhizopods occur only

in contagious catarrhs; as to this point he should have taught us how and where to find such catarrhs. Second. The feet or processes have been observed to draw into the body, to fuse, to vary in number from four to fifty, to vary in length in comparison to the diameter of the body of the cell. I have nothing to say on these points excepting that the so-called feet or processes are cilia, and that every statement might be made with equal truth of cells thrown off from an inflamed mucous membrane. Third. The gubernacular method of genesis. Dr. Cutter figures and describes a gubernaculum, but no "genesis;" he does not describe it, and I will admit that I am in error if he will *demonstrate it*. Fourth. The processes arise in scattered masses, while cilia of epithelium arise from a ridge. This speaks for a rather superficial study of such epithelium as seen in the product of a coryza; it is needless to say that the arrangement of the cilia and the shape of the cell undergo many variations in regard to the characteristics which belong to a normal ciliated cell. Fifth. The motion. This may be seen in a cell where the cilia vibrate as I have stated. Sixth. Destruction of movements by bland salicylic acid. The movement stops of itself in a few minutes; what Dr. Cutter says of strong chemical agents applies only to a healthy cell. Seventh. This repeats in detail what has already been stated as to motion, and adds the "crooking" of the "gubernaculum." Having answered as to movement I would reply to the latter point by referring to Figure 3, Plate XXI., of the 1857 edition of Hassall's Microscopic Anatomy; here it is seen that this characteristic of epithelial cells and some others were figured by Hassall twenty-one years ago.

THE PLAGUE.

WE have abstained from any remarks upon the epidemic now raging in Southeastern Russia until in possession of more reliable and exact information as to its extent and character. There seems no longer any reason to doubt that it is the plague. The large number of those exposed to the contagion who are attacked, its very rapid spread, the short interval (some hours in many cases) between the appearance of the first symptoms and death, and the enormous mortality, from eighty-five to ninety per cent. of those attacked, are all characteristic of the plague. We know of no exanthematous disease so sudden in its onslaught, with high fever, frequent pulmonary complications, and glandular swellings, especially in the groin, except the plague.

These buboes, where death has not intervened before their appearance, are sufficient to distinguish the disease from typhus fever of however malignant a type. In all descriptions of the disease, whether ancient or modern, they occupy the prominent place, and so pathognomonic have they been regarded that the term pest or plague, at first applied to every very fatal epidemic, became long since synonymous with *pestis bubonica*, or bubo plague. It is not probable that the Russian government has at any time since the middle of December been ignorant of the real nature of the disease, and greater frankness and consistency on its part would have disarmed the extravagant rumors which have been circulated, given confidence to its neighbors, and caused no more injury to commerce than the course which it has pursued.

The epidemic had assumed serious proportions by the 25th of November; the government was only officially informed of it on the 11th of December; ten days more elapsed before any systematic or energetic means were taken for preventing its spreading further, since which time the authorities have exerted themselves to the utmost. But though the precautionary measures adopted are as against the plague, namely, the erection of the infected districts into a distinct province with its own governor; the establishment of quarantine stations on the borders of this district, and of a double *cordon militaire*; an entire cessation of intercourse, as far as possible, and even of postal communication, except after thorough disinfection; and the wholesale destruction by fire of depots of provisions, and even of villages, — still so late as January 18th the government, though acknowledging a mortality of not less than eighty-four per cent. of the attacked, was using the terms “the epidemic,” “the disease,” “malignant typhus,” “galloping typhus with pneumonic complication,” and represented the disease as diminishing; at the same time private intelligence represented the disease as increasing, and it was openly called the plague in a St. Petersburg medical journal. This want of candor has undoubtedly tended to increase the panic and to foster exaggerated rumors. Although intelligent precautions have been taken in Moscow, as indicated by the closing of all basement dwellings, the erection of clean temporary buildings, of furnaces to burn infected clothes, and the gratuitous distribution of cooked food, the report that cases of the disease had occurred there or at Lower Novgorod was evidently premature. Indeed, the latest available accounts give every reason to suppose that the disease, at least as an epidemic, has not appeared either to the north or west of the quarantine station of Zaritzin. A telegram, it is true, has appeared announcing the appearance of the plague in Thessaly, and any day may greatly modify the situation. The infected district at present is in the lower valley of the Volga, near the Caspian Sea. The sanitary lines extend on both sides of the river, a distance of one hundred and fifty miles. Zaritzin, a town of fifteen thousand inhabitants, and a quarantine station, is at the north-western extremity of this district on the Volga, and Astrakhan, the capital of the province, at the southeastern extremity. There has been no actual outbreak of the disease in the town of Astrakhan itself. Its first appearance was in the village of Wetlianka, where it is reported to have been introduced in the booty of returned Cossacks, which had escaped disinfection. From whence these Cossacks had returned we do not know, but it is very certain that plague has been prevalent in the Persian province of Ghilan, at the southwest corner of the Caspian, since 1876; the chief intercourse of Russia with Persia is through the ports of this and neighboring provinces, and certain precautions have been taken by Russia for some time back against the introduction of the disease from this quarter.

Considering the very sparse population of the infected country, which is represented at from one to three to the square verst (two thirds of a square mile), the spread of the disease has been very rapid, its progress being reckoned at about thirty miles in three days. Thus far it seems to have followed the water communication of the Volga, but Zaritzin is connected by rail with the entire net-work of Russian railways and with the rest of Europe, and more-

over the valley of the river Don, which flows into the Sea of Azof, here approaches very near the valley of the Volga. Should this point be invaded there would be much greater cause for general uneasiness. For a vivid but careful account of what the plague can do under favorable circumstances we refer our readers to Hecker's *Epidemics of the Middle Ages*, where they will find the progress and consequences of the black death of the fourteenth century portrayed.

This was the most terrific visitation of disease on record, and one of the most important events in the history of modern civilization. It surpassed all other epidemics of bubo plague. The first extensive epidemic in Europe occurred in the middle of the sixth century, in the reign of Justinian, and is known by his name; its last appearances were in Malta in 1813, in Noja, Lower Italy, in 1815, in Majorca in 1820. It is a mistake, however, to suppose that plague was a disease of the past; cases are probably always to be found in parts of Persia and Syria.

In comparison with past epidemics Europe has in its favor at present the greater cleanliness and better ventilation of its towns, and the better knowledge of sanitation in quarantine and disinfection; but on the other hand, the disease is favored by the great rapidity and intricacy of communication between different points, and the consequent difficulty of making practical application of our increased knowledge. Notwithstanding the virulence of the plague of the fourteenth century there elapsed three years from its exportation from Syria in 1347 to its introduction into Russia in 1351, and this was effected by the way of Sweden and Norway, after it had made the complete circuit of Europe. It took the disease three months to travel from the coast of England up to London. There has always been much difference of opinion as to whether the plague is a directly contagious disease, and it is perhaps better to regard the question as an open one still. Liebermeister calls attention to the fact that the same discussion has been and is still going on in relation to typhoid fever, cholera, and dysentery, and classifies the plague with them among the contagious miasmatic or indirectly contagious diseases. The contagion is certainly, as a rule, indirect, that is through clothes and other effects, and not directly transmitted from individual to individual. The stage of incubation is given at from two to seven days, but the plague poison is supposed to be capable of living a very long time under certain conditions outside the human body.

The season of the year and climate have only a very slight influence upon the disease, but moderate warmth with dampness seem favorable to its propagation. It is not a disease of tropical climates, and the extremes of temperature, though not hindering the spread of the disease, diminish it. The epidemic of the fourteenth century is reported to have attacked the robust by preference. Though so far removed from its seat the present epidemic is of the greatest interest to us in the United States in its character and progress. It offers us an opportunity to observe the application and efficiency of various systems of quarantine upon an extended scale, and of methods of disinfection, from which much may be learned of value in dealing with those epidemics which threaten our own quarter of the globe.

THE INSANE.

IN continuation of our discussion of insanity, we should notice a meeting held on Monday evening, February 3d, in Tremont Temple, Boston, to consider the subject of the committal of insane people to asylums, and their treatment while there. Considering the fact that the lawyer occupying a prominent seat on the platform began his efforts some months ago, he can hardly be congratulated on his success. Hon. S. E. Sewell, Mr. Wendell Phillips, Chas. G. Fall, Esq., and the author of *A Mad World and its Inhabitants*, the latter two having been introduced as *distinguished gentlemen*, were the sole occupants of the platform. Massachusetts was placed one hundred years behind England, Belgium, and even France in laws regarding insanity; twenty men from high social life in Boston were reported shut up in the McLean Asylum because they brought disgrace on their kindred through intemperance; Mrs. —, whose case was related in the JOURNAL some time ago, was said to have been "held to the floor while an infuriated nurse tears her throat to ribbons with the sharp end of a spoon;" and one facetious young woman, who was alleged to have assisted in sending her mother to an insane asylum for refusing to consent to her marriage with the man she wanted, was reported by a volunteer speaker as having committed matrimony to her liking, and then having been kicked out of bed by her lord and master within six weeks. We need not further explain why we consider the meeting, as a whole, beyond the range of sober criticism. The lawyer repeated his statement that all insane people placed in state asylums must be sent by the courts, while two medical certificates sufficed for the private asylums, although his attention had been called to its incorrectness when he made it in the columns of one of our daily papers several months ago. Indeed, during the year 1878, *all* the private patients placed in the Danvers Hospital, fifty-one in number, were committed by their friends or relatives, precisely as at the "private asylums," and *none* were sent by the courts; at Taunton five were so committed, and five by the courts; at Northampton six, and four by the courts; at the Worcester Hospital twenty-four, and thirty-eight by the courts.

The Holm case was an unfortunate one. Although the physicians connected with sending him to the asylum and detaining him there acted in a thoroughly honest way, whether or not the family were mistaken or hasty, there can be no doubt that serious defects in our laws have been revealed. In the later case of the general paralytic, referred to by us last week, money was offered with some liberality to experts who declined to testify. *Non tali auxilio, nec defensoribus istis.* The cause is a good one, and, in spite of the harm done to it by the meeting to which we have referred, is likely to be successful, and be treated in a rational way. If Governor Talbot's plan of a consolidated board of health, charities, and lunacy is carried out, of course the ground will be satisfactorily covered; and a judicious central board to manage the affairs of the insane would be welcomed by the superintendents, as well as put an end to the complaints and carpings of fault-finders, and the inevitable misconstructions that always prevail under our present system. Our asylums are already managed by their medical officers with all possible kindness.

MEDICAL NOTES.

— Dr. David W. Cheever, of the City Hospital, a few days ago removed a large tumor from the neck of one of the hospital patients. The latter was a man forty-three years of age, who first came to the hospital one year ago, at which time he was advised to have the growth removed, but refused. At the time of the operation the tumor was twenty months old, and had developed rapidly during the past two months. Dr. Cheever tapped it some weeks ago, giving issue to half an ounce of glairy fluid. The tumor was as large as a small cocoa-nut; was situated between the lower jaw and clavicle on the right side; was very irregular and lobulated in form, sending out processes in all directions, notably upward toward the ear and directly backward to a line downward from the mastoid process. Dr. Cheever made two incisions: one extending from the angle of the inferior maxillary nearly to the inner end of the clavicle; the other at right angles with the first, and extending from the middle of the lower jaw nearly to the mastoid process. The platysma and sterno-cleido-mastoid muscles were imbedded in the tumor, and were removed with it. The growth was firmly adherent to every tissue in its vicinity, and was loosened only with great difficulty. Small districts of deep portions of the growth were found to be degenerated. The tendon of the digastric was uncovered, and finally the sheath of the carotid artery, on the outer side of which the tumor had infiltrated among the muscles of the neck. Further dissection revealed the scalenus anticus its upper portion being entirely free from infiltration, but infiltrated matter had penetrated behind it. Nearer the clavicle, when the body of the tumor had been lifted away, was discovered considerable infiltrated substance, enucleation of which was not attempted. Above this point everything was left clean.

The tumor was microscopically examined by Dr. E. G. Cutler, who found it was an adenitis and a peri-adenitis of the cervical glands. It weighed two drachms less than one pound.

— Female pharmacists are quite numerous in Holland. The fashion was set by a Miss Tobbe, who wished to make herself useful in her father's apothecary shop. There was considerable difficulty in obtaining the title, owing to the law, but this has now been altered, and the number of students is at present large. They are much sought for, and are recommended for their orderly habits, their cleanliness, and accuracy. We understand that ladies have become very proficient in the chemical laboratory of the Institute of Technology in this city. This is a kind of work for which women, in our opinion, are eminently more fitted than the practice of medicine.

— The winter meeting of the councilors of the Massachusetts Medical Society occurred on Wednesday, February 5th, at the rooms of the Medical Library Association, the president, Dr. George H. Lyman, in the chair. The chairmen of the various committees made their reports. Nothing of more than ordinary interest transpired until the report of the committee on membership was read. This gave rise to considerable discussion. In regard to delinquent members the general sense of the meeting expressed itself in the

affirmative acceptance of Dr. Bronson's motion that a certain member be sued. The pertinent question as to the actual effect of dropping a member for non-payment of dues was asked, but not answered. The feeling seemed to be that to drop a member merely for non-payment of dues would injure him unnecessarily and establish a bad precedent, for if a Fellow can pay he should be made to pay; if not, his dues should be remitted.

Another topic of interest was the code of ethics. Dr. Cotting stated that at a January meeting of the committee the chairman had been requested to report progress and ask for further time. They had agreed to exclude from the code everything to which objection was made at the 1878 June meeting, retaining all which relates to live questions, and which will assist young practitioners, and aid in settling every question which would be apt to arise. Dr. H. J. Bigelow said that while the code was a code of conduct, and therefore contained something more than mere principles, it would not be possible to arrange for every minor matter which might arise between physicians, that the line should be drawn somewhere, and that he thought the code should be reduced to its minimum, thus avoiding unnecessary and useless verbiage. After some discussion, of which the strongest point was that the society needs the protection of a solid code of ethics, it was agreed that the committee should have the time for which they asked, namely, until the October meeting.

Dr. Sappolini, president of the Medical Society of Milan, was recommended for honorary membership.

On motion of Dr. Draper, it was voted that the treasurer be authorized to treat with the Medical Library Association for rental of its rooms for a term of years for meetings of the councilors at a sum not to exceed \$150.

Drs. Ellis, Bowditch, and Storer were appointed a committee to draw up resolutions relative to the death of Drs. Jacob Bigelow and J. B. S. Jackson. Other committees were appointed for similar service in other parts of the State.

NEW YORK.

—Mr. Callender lately performed an amputation, by the invitation of Prof. James R. Wood, at his Saturday afternoon clinic at Bellevue Hospital, in the presence of one of the largest medical audiences ever gathered in New York, and on the 5th of February he sailed for England by the steamer *Scythia*.

—Dr. E. H. Janes, assistant sanitary superintendent, states that while there are undoubtedly cases of pleuro-pneumonia among cattle in the neighborhood of New York and Brooklyn, as is very apt to be the case at this season of the year, there is no reason whatever to suppose that there is any special increase in it the present winter. From information furnished by large dealers and others in a position to know, he believes that there is really very little of the disease here, and he thinks that the jealousy of dealers in England and their charges against American cattle have started the idea that it exists to a large extent in this country.

THE NAVY.

—Too much praise cannot be accorded those members of our profession who have bravely and conscientiously attended the yellow fever victims, but while we heartily appreciate their efforts we think that they did only their duty. Several bills are before Congress to give unprecedented advancement to medical officers of the navy as a reward for simply performing their duty. This appears to be somewhat hasty and injudicious, since at least half the members of the medical corps of the navy have attended yellow fever patients, and the remainder have been quite ready to perform the same service.

LETTER FROM LONDON.

SEWERAGE-SYSTEMS.

MR. EDITOR,—In my last letter I gave a sketch of the stages through which the sewage question has gone, up to the passing of the Rivers Pollution Act of 1876, and I was proceeding to describe some of the measures which are being taken by the different towns to enable them to act in accordance with the requirements of the law, beginning with an account of the cess-pool or pail system, as it is being carried out in some of our large manufacturing towns. In my present letter I shall endeavor to explain the methods of dealing with the sewage where water-carriage is employed, only two of which can be said really to aim at epuration, namely, chemical treatment and irrigation over land; for the methods of simple filtration and mechanical deposition are so obviously inadequate that they may be left out of account.

Of the chemical processes the one which has been most extensively employed is that which is known as the "precipitation by lime," which consists simply in the addition of cream of lime to sewage water, by which many of the constituents previously in solution are thrown down, carrying with them the solids held in suspension. As a matter of fact, however, a quantity of organic material is left behind in the effluent water, which, though in appearance quite clear, is from the sanitary point of view little better than before the addition of the lime, and quite unfit to be turned into the rivers. Nevertheless there are a good many towns, some of them of large size, which are still making use of this process. The largest of these is Birmingham, where, although, as I mentioned in my last letter, a large proportion of the excreta is collected by the pail system, all the water-closets in the town empty into the sewers, and it is still necessary to adopt means for purifying the sewage. As much as thirteen tons of lime are used daily in Birmingham, and after the mixture has been effected the resulting liquid is allowed to pass slowly through a series of tanks, where the precipitate settles. This precipitate is not found to fetch a good price as manure, and the process is therefore unsatisfactory, not only from the fact that the water is not adequately purified, but also because it produces little, if any, return for the outlay upon it. This process is carried out also at Bradford, a town with about 180,000 inhabitants, and at Leicester, with 110,000. In some places other chemical substances are added with the lime, as, for instance, at Bolton, in Lancashire, where lime, carbon,

and a dilute acid are added; but all methods in which lime is the main agent have failed to get rid of all the organic impurities, and hence the liming process is being gradually abandoned, or, as is in some places the case, irrigation is being superadded.

The process which, next to the addition of lime, has been most largely used, is that known as the A B C method. This consists in the addition of a mixture of charcoal, blood, and clay to the sewage, which is subsequently treated with a salt of alumina to precipitate certain impurities, which would be otherwise left behind. The principal town where this process is carried out is Leeds, with 300,000 inhabitants (which is, however, partly dealt with on the pail system), where it has been adopted after a series of experiments with various chemical methods. The plan has, however, been too recently begun for any definite conclusions as to its ultimate value to be arrived at. For the present it cannot be made other than a very expensive one, for it is costing the municipality not less than from \$18,000 to \$20,000 a year. At Leamington, in Warwickshire, a town with 20,000 inhabitants, where the A B C process was tried for four years, it was abandoned, partly on account of its expense, and partly, it was said, on account of the imperfection of the results. Experiments have, however, been made with a portion of the London sewage to test this method, and with good results so far as the purification was concerned: for the analyst who was appointed to watch them on behalf of the metropolitan authorities reported that the effluent water was sufficiently clarified to be admissible into any ordinary river without producing a dangerous degree of pollution; nor was the manufacture found to be productive of nuisance; but the money value of the manure was stated to be so small that the process could not be otherwise than very costly, and hence it was decided not to adopt it for the sewage of London. On the other hand, the process has been found to work very well at Aylesbury, a small town of about 7000 inhabitants, in Buckinghamshire. Here the effluent water is allowed to pass through a fish pond, and it is found that fish can thrive and multiply in it, showing that the amount of organic pollution must be small. The manure made from the precipitate is also in great demand amongst the farmers of the surrounding districts and is even supplied to distant places, large orders having during the past year, been received from Italy. As is the case with anything else that is new, there is a great deal of prejudice to be got over, and moreover a large demand for a new material cannot be created all at once, so that it is quite possible that, as time goes on, the A B C process may prove far more remunerative in the case of large towns than it is possible to make it at present. To judge by results, it certainly appears to be one of the more hopeful of the many projects that have been suggested with a view to solving the sewage problem.

I can only briefly refer to the various other chemical processes that have been tried. At Coventry, where there are 40,000 inhabitants, a method known as "Anderson's process" is in use, which consists simply in the addition of an impure sulphate of alumina to the sewage. The effluent water is said to be very clear, and fit to be discharged into any river. At Tottenham, with 30,000 inhabitants, Whitbread's process is in use, in which a mixture of monocalcic phosphate, dicalcic phosphate, and milk of lime is added to the sewage, with

the result that suspended matters are completely removed and the organic nitrogen nearly so, the effluent liquid containing phosphoric acid and ammonia. The process was reported upon favorably by the committee on sewage appointed by the British Association, some years ago. Several other processes have been suggested, but most of them are inefficient, or they have not been tried on a large enough scale to allow of any definite statement as to their merits. I will therefore pass on to the question of sewage irrigation.

Of all the processes hitherto employed for the purification of water-carried sewage, by far the most interesting, and in many ways the most important, is that of sewage irrigation. Where it can be carried out under favorable circumstances it is very much the cheapest method; it is attended with the least possible waste of valuable manure; the sanitary results, so far as the effluent water is concerned, are perfect; and there can be little doubt that in the long run it must be found to be a financial success. Hitherto various difficulties have been met with from time to time. For instance, in certain towns, for some cause or other, land has been chosen for irrigation which was considerably higher than the main sewer outlet, and consequently it has been necessary to employ powerful pumps to raise the water to the requisite level. Thus, at Leamington, where, after the abandonment of the A B C process already mentioned, it was resolved to try sewage irrigation, the sewage was let to the Earl of Warwick for £450 per annum, but the earl stipulated that it should be delivered free on to his land, and he selected for the experiment one of his farms situated two miles from the town and at an altitude 130 feet higher than the sewer outfall. The result was that the town had to spend over £16,000 in putting up steam-engines, making a conduit, etc., in addition to which the expenses of pumping amounted to about £1000 a year; so that, taking into consideration the interest on the loan necessary for the preliminary outlay, the municipal authorities had to pay £1600 a year merely because land had been chosen for the purpose which was higher than the sewer level. To show that sewage irrigation is not necessarily associated with a heavy outlay of this kind I will quote the case of Rugby, which is situated within a few miles of Leamington. Here land has been judiciously chosen, so situated that the sewage can run on to it without any pumping, and here not only have no preliminary expenses been incurred (the sewers themselves having been previously made), but the town is able to make a profit of something under £100 a year by subletting, at a considerably higher rent than it was itself paying, the farm rented for the irrigation purposes.

Another difficulty which has been experienced is that although the effluent water is purified, even to the extent of being fit and pleasant to drink, yet in certain instances there has been gross violation of the laws of hygiene in the process of irrigation, and the farms have been allowed to become a nuisance to the neighborhood. It is somewhat hard to get at the exact truth in a matter of this kind, for the authorities are very careful to exclude unwelcome facts of this nature from their reports, and those who suffer from the evil are for the most part little people who are unable to make their voices heard by the general public. I have heard, however, from a trustworthy private source, that at Tunbridge Wells, in Kent, where irrigation is employed, the people living in the cottages in the neighborhood of the farm constantly suffer from

vomiting and diarrhoea whenever, during the warm months, the wind blows off the farm towards them. This town is in the centre of the great hop-growing district of Kent, and I am told that since the introduction of irrigation the hop-pickers working upon the sewage farm suffer at times severely from the same condition, those on the surrounding farms remaining in their usual health. I am afraid that if the truth were known this state of things would be found to be not unfrequently associated with the sewage farms. Against this, however, it is only right to quote the town of Ware, in Hertfordshire, where a tenant farmer, living in the centre of a sewage farm which serves as the receptacle for the excreta of 9000 people, testified to the excellent health enjoyed by himself and all his family. This farm abuts upon a large pleasure ground much used as a holiday resort by the lower classes of London. So far as I have been able to learn, no complaint has ever been heard from this source.

A third difficulty which has been met with is in the quantity of water mixed with the more valuable sewage material. In England it is almost universally the custom to employ the same sewer for the house sewage and the surface water. The whole of the water then becomes polluted, and has to be cleansed. During wet seasons the quantity of water becomes unmanageable; where pumping is necessary, the pumps are liable to become unable to deal with so much liquid, and even if it is carried to the land, so much water added to land already perhaps too wet is likely to do more harm than good. To carry out sewage irrigation in perfection, it will be necessary to make a double set of drains, one for the house and the other for surface water, with the power of utilizing the surface water for the farm at any time that it may be required. At all other times the surface water would be conveyed straight to the river.

A few words as to the quantity of land necessary to cleanse a given quantity of sewage. It is found that so long as land is thoroughly well drained it can purify far more sewage water than it can be said to make use of agriculturally; that is to say, that though 1000 gallons of sewage per diem on a given piece of land will produce the utmost degree of fertility of which the land is capable, yet if 5000 gallons per diem be thrown on to the land, the land will be able to purify it without detriment to itself or to the crop upon it. At the same time care is necessary not to let the water run on too quickly; for, to quote the words of one of our leading agriculturists, "experience has proved that overfeeding with sewage for years has no ill effect, although land may be *choked* with it in one meal." The average in England varies very much. At Edinburgh, which is the largest town that has hitherto been treated by sewage irrigation, and which, moreover, has the honor of having been the first to adopt this method in a systematic manner, there are only 323 acres of land for the sewage of 200,000 people,¹ or about one acre to 600 people, necessitating the supply of about 7800 gallons of liquid per acre per diem. At Doncaster, on the other hand, a farm of 263 acres is set apart for the sewage of 20,000 people, or about one acre to 76 people. Although at Edinburgh the effluent water is quite pure, yet it is certain that the sewage is not being properly utilized, for the amount of organic matter contained in so large a quantity of sewage would probably be sufficient to manure efficiently quite ten times the

¹ It must be borne in mind, however, that Edinburgh, as was mentioned in the last letter, is partially dealt with on the pail system.

area at present employed for the purpose. As a general rule, the towns which have adopted irrigation have chosen farms of such a size that each acre corresponds to a number varying from fifty to a hundred of the population, though even with this proportion it is probable that the sewage is not put to the greatest possible use.

The results of sewage irrigation are, from the agricultural point of view, admirable. To show how it can improve land, even to the extent of making land fertile which was previously useless, I will quote the case of Aldershot, the great military station in Hampshire. Here the sewage from the North Camp, which has a population of 8000 souls, is carried on to 100 acres of sandy heath, which before the irrigation was not worth a shilling an acre per annum. Part of this land is now let for £20 an acre per annum; and the whole of it has proved most productive, Italian rye-grass, mangold-wurzel, and potatoes being the principal crops. At Cheltenham, again, where the sewage from 50,000 people is disposed of by irrigation, the root crops grown on the farm won the first prizes at all the agricultural shows in the district, until at last they were excluded from competition with the produce of ordinary farms. The favorite crop, however, on sewage farms is Italian rye-grass, and of this it is the rule for four and even five crops to be obtained per annum. The farmer at Cheltenham says that "sewage pays best on poor, hilly, heavy grass land, as it makes one acre worth five." The greatest proof of the utility of sewage irrigation is to be found in the fact that, in addition to the very considerable number of corporations which are conducting their own sewage-farm operations, there are now upwards of a hundred owners and occupiers of land in Great Britain who are using town sewage on a large scale, of whom three fourths pay money for the privilege. It is not too much to hope that in a few years all towns will be able to find an advantageous market for their sewage, which will then be a source of revenue instead of being, as is now so commonly the case, a dead loss.

To sum up, then, the future of the sewage question seems to be resolving itself into the following shape: to a very large extent, the pail system will be used in large towns for the lower classes; irrigation will probably be employed almost universally for water-carried sewage. To prevent the farms from being a nuisance, the sewage will have to be subjected to a rough process of purification, by chemical or other means, before being turned on to the land. To prevent the land from becoming water-logged, and to increase the value of the irrigation, a double system of sewers will have to be adopted, one for surface drainage, and the other for the houses. Here and there certain chemical methods like the A B C process may exist alone, but my own belief is that even these will be made subservient to irrigation, and that the effluent water will still be found sufficiently rich in products useful in agriculture to be employed on the land where this can be done without incurring any large outlay. When it is remembered how short a time the question has been seriously under consideration, I think we may congratulate ourselves that the principles by which this gigantic problem is to be solved are so nearly settled. An immense deal yet remains to be done to raise our towns to the level I have shadowed forth, and above all other difficulties to be surmounted is that involved in the question of the utilization of the sewage of the 4,000,000 peo-

ple of London; but events travel quickly nowadays, and under the stimulus of the law, added to the prospect of good financial results, we may hope to see a greater advance in the next twenty years than has occurred in as many centuries before our time.

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 1, 1879.

Cities.	Popu- lation. Estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from					
				The Princi- pal "Zymo- tic" Diseases.	Pneumo- nia.	Diphtheria and Croup.	Scarlet Fe- ver.	Diarrhœal Diseases.	
New York.....	1,085,000	624	29.99	18.75	12.98	3.21	7.69	2.08	
Philadelphia.....	—	391	—	—	13.78	1.53	3.32	—	
Brooklyn.....	564,400	216	19.87	13.43	15.23	6.02	4.17	—	
St. Louis.....	—	111	—	9.99	18.91	3.60	—	1.80	
Chicago.....	—	150	—	18.67	8.67	8.67	4.67	0.67	
Baltimore.....	365,000	153	22.57	15.19	17.09	8.86	1.27	—	
Boston.....	356,500	144	21.07	11.81	14.58	6.25	2.78	0.69	
Cincinnati.....	—	120	—	25.00	6.67	4.17	12.50	0.83	
District of Columbia...	—	96	—	9.19	19.79	4.17	4.17	1.04	
Pittsburgh.....	—	49	—	22.45	14.28	8.16	2.04	—	
Milwaukee.....	—	23	—	39.13	4.35	34.78	—	4.35	
Providence.....	—	27	—	3.70	22.22	—	3.70	—	
New Haven.....	—	15	—	6.67	13.33	—	—	—	
Charleston.....	—	24	—	4.17	4.17	4.17	—	—	
Lowell.....	53,300	26	25.43	7.69	19.23	7.69	—	—	
Worcester.....	52,500	17	16.88	5.88	23.53	5.88	—	—	
Cambridge.....	51,400	20	20.28	30.00	10.00	15.00	5.00	—	
Fall River.....	48,500	19	20.43	15.79	15.79	10.53	5.26	—	
Lawrence.....	33,200	8	10.92	25.00	12.50	12.50	—	—	
Lynn.....	34,000	9	13.81	—	—	—	—	—	
Springfield.....	31,500	17	28.14	11.77	11.77	5.88	—	—	
New Bedford.....	27,000	—	—	—	—	—	—	—	
Salem.....	26,400	9	17.78	22.22	—	—	11.11	—	
Somerville.....	23,350	6	13.40	—	33.33	—	—	—	
Chelsea.....	21,800	5	12.54	20.20	—	20.00	—	—	
Taunton.....	20,200	—	—	—	—	—	—	—	
Holyoke.....	18,200	12	34.38	8.33	16.67	—	—	—	
Gloucester.....	17,100	8	24.39	12.50	12.50	—	—	—	
Newton.....	17,100	3	9.15	33.33	—	—	33.33	—	
Haverhill.....	15,800	12	40.90	25.00	8.33	25.00	—	—	
Newburyport.....	13,500	4	15.45	—	—	—	—	—	
Fitchburg.....	12,500	5	20.86	—	—	—	—	—	

Two thousand three hundred and twenty-eight deaths were reported: 352 from consumption, 317 from pneumonia, 108 from scarlet fever, 82 from diphtheria, 75 from bronchitis, 43 from croup, 34 from whooping-cough, 29 from typhoid fever, 20 from diarrhœal diseases, 14 from cerebro-spinal meningitis, seven from erysipelas, and four from measles. None from small-pox.

From *bronchitis* 35 deaths were reported in New York, 17 in Brooklyn, six in St. Louis and Chicago, five in Cincinnati, two in Holyoke, one in Boston, New Haven, Gloucester, and Haverhill. From *whooping-cough*, 16 in New York, six in Cincinnati, four in Brooklyn, two in Baltimore, Pittsburgh, and Cambridge, one in Boston and Fall River. From *typhoid fever*, nine in Philadelphia, five in St. Louis, four in New York, three in Baltimore and Pittsburgh, two in Chicago, one in Brooklyn, Boston, and Cincinnati. From *cerebro-spinal meningitis*, four in Chicago, two in Cincinnati, one in New York, Brooklyn, Baltimore, and New Haven. From *erysipelas*, five in New York, one in Chicago and Boston. The returns from seventeen of the nineteen cities in Massachusetts, with a population of 830,150, show an increased mortality from cerebro-spinal meningitis, erysipelas, and whooping-cough; from dysentery about the same, and less from the other zymotic diseases and pneumonia. Nashville remains quite free from the infectious diseases, no deaths from them having been reported for the week. There was one death from trismus nascentium in Charleston; scarlet fever and diphtheria were diminishing in Cleveland, but prevalent. Acute pulmonary diseases very prevalent in New Orleans, but not diphtheria and scarlet fever.

Sergeant Purcell's meteorological record for the week, in Boston, is as follows:—

Date.	Barom-eter.	Thermom-eter.		Relative Humidity.		Direction of Wind.			Velocity of Wind.			State of Weather.			Rainfall. (Melted Snow.)				
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Daily Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration in Hours.	Amount in Inches.
Jan. 26	30.841	27	35	42	59	48	NW	NW	NW	23	18	14	C	C	C	C	—	—	
" 27	30.031	28	38	25	61	68	O	SW	W	0	11	14	O	O	R	F	5.0	.01	
" 28	29.920	45	56	37	82	82	SW	W	W	8	11	11	R	O	F	F	4.5	.05	
" 29	30.179	26	49	16	70	42	N	NW	NW	1	20	18	F	C	C	C	—	—	
" 30	30.086	23	33	9	61	34	NW	N	NW	7	14	7	C	C	C	C	—	—	
" 31	29.686	31	39	19	75	45	W	W	W	5	13	8	O	O	C	C	—	—	
Feb. 1	29.497	18	40	9	72	49	NW	NW	NW	6	20	17	F	F	C	C	—	—	

Weekly Sum-mary.	Barometer.	Thermometer.		Humidity, Saturation being 100.	Wind.	Rain.
	Mean 29.963	Mean	25.6	Mean 57.9	Total miles trav-elled, —.	Total amt. .06 in.
	Max. 30.427	Max.	56.0	Max. 82	Prevailing direc-tion, N. W.	Duration, 9 hrs. 30 min.
	Min. 29.434	Min.	2.0	Min. 28		
	Range .993	Range	54.0	Range 54		

Barometer corrected for temperature, elevation, and instrumental error.

Explanation of weather symbols: O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., snow; L. S., light snow; T., threatening.

Station: Latitude $42^{\circ} 21'$; longitude $71^{\circ} 4'$; height of instrument above the sea, 77.5.

Surgeon-General Woodworth reports small-pox prevalent and yellow fever less so in Havana; small-pox raging in the northern provinces of Brazil, and the "black plague" somewhat prevalent; also small-pox, yellow fever, and pernicious fever fatal in Rio de Janeiro. The death-rate for the week ending January 18th for the twenty large English towns with a population of 7,383,999, was 28.1, an increase of one per 1000 from the previous week: for London 28.1, Dublin 48.3, Liverpool 36.4, Manchester 34.9, Birmingham 29, Brighton 19.8, Sunderland 20, Glasgow 27, Edinburgh 23. Acute pulmonary diseases were very prevalent. One hundred and twenty-seven deaths were reported from scarlet fever, 121 from whooping-cough, 50 from fever, 36 from measles, 20 from diphtheria, and 12 from small-pox (all in London). There was an increased mortality from small-pox in Dublin. For the week ending January 11th, in one hundred and forty-nine cities and towns of Germany, with a population of 7,460,963, the annual death-rate was 24.8: 27 in Berlin, 23.6 in Leipsic, 27.8 in Munich, 30.6 in Dantzic, 22.5 in Dresden, 24.8 in Hamburg, 23 in Cologne. Four hundred and ninety four deaths were reported from consumption, 413 from inflammatory diseases of the respiratory organs, 174 from diphtheria and croup, 99 from scarlet fever, 59 from whooping-cough, 49 from typhoid fever, 44 from measles, 28 from puerperal fever, three from typhus, none from small-pox. Fevers are very prevalent, cholera mildly so, in India. Small-pox and typhoid fever still prevail in Paris; small-pox, typhus and typhoid fevers, in St. Petersburg; scarlet fever and diphtheria in Berlin; small-pox and diphtheria in Vienna; small-pox and typhus in Budapesth; typhus fever in Naples. Although cases of the plague are reported in Thessaly, the indications are that it is abating in Southeastern Russia.

ERRATUM.—In the last number of the JOURNAL, page 198, line 25, the word "lime" appears instead of "wine."

MASSACHUSETTS MEDICAL SOCIETY.—A meeting of the Censors of the Massachusetts Medical Society will be held at the Medical Library, 19 Boylston Place, February 20th, at three P. M.

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LECTURES.

CLINICAL OBSERVATIONS UPON PARALYSIS FOLLOWING
TYPHOID FEVER; PSEUDO-HYPERTROPHIC MUSCULAR
PALSY; AMYOTROPHIC UNILATERAL SPINAL SCLERO-
SIS; AND OTHER CASES AT THE ORTHOPÆDIC HOSPI-
TAL, PHILADELPHIA.

BY S. WEIR MITCHELL, M. D.

Paraplegia following Typhoid Fever. — This young girl presents a very interesting instance of paralysis after one of the essential fevers. Her clinical history is briefly as follows: She is now seventeen years of age. Two years ago she had a decided and protracted attack of typhoid fever. After a tedious illness she was quite weak, and convalescence was necessarily prolonged. She had some convulsive muscular movements in the lower limbs after the fever left her, and she recalls the fact that she vomited very much. Upon attempting to move the inferior extremities she found that they were completely powerless. When she came to us, last spring, the muscles were atrophied and contracted; the knees were semiflexed, and ankylosed in that position by fibrous adhesions. She was immediately put on strychnia, iron, and a liberal diet, while massage and the constant current were daily applied to the affected muscles. The false ankylosis was overcome by force, during etherization, and passive movements, and a Stromeyer splint was applied. She had always been exceedingly nervous while under observation. After two months' treatment she was discharged about the 1st of last July, able to walk without assistance. She then left us to go to her home in the country, and to-day returns, according to my request, to report her progress.

I now find that she has all the movements of the limbs, but the range seems to be limited. She does not kick very strongly; we notice that she is getting very nervous under our close observation, and has a general hysterical tremor. She can walk without aid, and tells us that her limbs are a great deal stronger, and have kept on steadily improving since I saw her last. Her strength must, indeed, be much increased to enable her to stand without assistance, and with the knees partially

flexed, as they are at present. The Stromeyer splint she still wears at night, and the gymnastic exercise of legs, on the Swedish movement plan, is still kept up. She has manifestly improved, but from her pallor it is evident that she still needs tonics. In combination with iron I am very apt to give one of the three valerianates — either of iron, zinc, or strychnia — to cases of general nervousness, or hysteria. Perhaps the following prescription will answer the purpose, and be more suitable for hospital patients, as it is comparatively inexpensive: —

R Zinci valerianatis,

Ferri tartratis 3ā gr. ij.

M. Ft. pil. Sig. Capiat ter in die.

Her mother says that the patient is troubled with constipation. For this I recommend that she take each morning, on rising, a tumblerful of water containing in solution a teaspoonful of common salt. The water must be cold, or it will be apt to nauseate. This simple aperient I frequently employ in cases of constipation, and generally find it efficient. There is a great advantage in starting the bowels and in keeping them in a soluble condition, particularly in cases of nervous disorder in women, as it sometimes clears up obscure points in the case, and at all events eliminates one source of error.

The hysterical element in this patient, which has been previously remarked, has complicated both the diagnosis and the treatment. There is evidently a spinal affection present, in all probability connected with some degeneration of the cells of the grey columns of the anterior cornua. It is an organic affection painted upon a hysterical background.

Pseudo-Hypertrophic Muscular Paralysis. — The appearance of unusual physical development seen in this girl, more particularly observed in the lower extremities, is not accompanied by a corresponding increase in muscular power, but, on the contrary, in her attempts to use the limbs in walking it is only too evident that there is a positive impairment of strength. This affection began insidiously when she was about fourteen years old, and, to all appearances, in perfect health. She first noticed a slight difficulty in trying to stand still; she could not steady herself, but swayed backward and forward when the feet were together, — a trouble, apparently, of muscular coördination. This symptom became more aggravated, and soon, whenever she essayed to walk, she would stagger from side to side, had difficulty in checking herself, and constantly ran against articles of furniture or whatever was in her path. She had festination in walking, and in going across a room would miscalculate the distance and come violently in contact with whatever object she tried to reach. This symptom, she tells us, is still present; the rocking and staggering have not grown any worse. She was also very apt to drop anything that she attempted to hold or carry in her hands. There was no numbness, and no pain in the limbs.

Headache, probably migraine, she had always been subject to ; formerly these attacks came on about every two weeks, and were always followed by fever and vomiting ; at present they are less frequent. She never experienced any ocular trouble ; she considers herself in good health in every other respect than the symptoms just indicated.

Upon referring to the patient's record book, I find that this patient first applied at this hospital for treatment on the 8th of March last. Her face was then pale and puffy ; her speech accentuated and hesitating ; her lower limbs were large ; and when placed supine upon the floor, she experienced the characteristic difficulty in attempting to regain the erect posture. Her face flushed readily under excitement, and her pulse was quick, but the hands and feet were generally cold. She slept well. The eyesight wavered a little ; there was no hemiopia, but she sometimes had double vision. Hearing was good ; at one time she had been much annoyed by noises in the ears, which had now passed away. Upon examination we found that there was sometimes true vertigo ; she was most unsteady when standing with the heels together ; rocking the knee produced muscular contractions. Upon closing the eyes the unsteadiness greatly increased. In the affected limbs sensibility to the faradic current was much diminished. The urine was not albuminous. An ophthalmoscopic examination gave only negative results. Under the treatment to which I will presently refer, her general health greatly improved, and her appearance gradually became more natural. The following measurements were made at a subsequent visit (November 29, 1878) :—

		Left.	Right.
Lower extremities	8 inches above lower margin of patella	16 $\frac{3}{4}$	16 $\frac{3}{4}$
	4 inches below lower margin of patella	14 $\frac{1}{8}$	14 $\frac{1}{8}$
Upper extremities, 4 inches above the insertion of biceps, arm semiflexed		10 $\frac{1}{4}$	10 $\frac{1}{2}$

This case brings up for discussion some very interesting points in the pathology and treatment of pseudo-hypertrophic muscular paralysis.

I have seen seven cases of this disease. In five there was a syphilitic history in father or mother, yet a specific treatment was as useless as it commonly is in cases of locomotor ataxia, having also a possible syphilitic factor. The inutility of anti-syphilitic therapeutics under these circumstances has been disputed, but I am sure that it is true of my experience in ataxia and pseudo-hypertrophic palsy. Indeed, the previous existence of syphilis is too often taken as an assurance that specific treatment will be of use in sequent disease. I do not remember one success arising out of the presumption of syphilis as a parent of sclerosis. I have come to doubt the parentage, or to fancy that it might be due to syphilis, and not be itself a syphilitic phenomenon, a thoroughly reasonable suggestion to my mind. I do not mean to discuss the pathology of the disorder now before us. It is as yet unsettled, and may be safely

left to that great discoverer, the future; but I will remind you in passing that I have described areolar tissue hypertrophies owing to injuries of nerve trunks, which latter may therefore cause either wasting or overgrowth. The combination of circumstances causing the latter must be rare. They may possibly be made up of a grouping of constitutional states and local nerve troubles. This seemingly simple problem we have not yet solved, and the deeper and darker one of the causation of progressive intra-muscular areolar hypertrophy is also unsolved.

All treatment is useless here. The disease has, however, a slow march, and sometimes halts, as one may do who, having an inevitable staircase to descend, lingers on certain steps a while. I have found it useful to put on apparatus mechanically to support the spine and legs, when the time came that locomotion unaided was about to end.

Amyotrophic Unilateral Spinal Paralysis. — This man, thirty-six years of age, presents a peculiar paralysis of the right leg and arm, evidently due to a spinal trouble. For his history and treatment I must turn to the notes. He first applied for treatment September 27, 1878. He then told us that he had worked in lead paint for twenty years. He positively denied venereal infection. Three years before, in the spring of 1875, he had been attacked, without assignable cause, with pain, which began in the right elbow, and ran up the back of the arm to the shoulder, through the shoulder blade, and down again. The pains were sudden, and of a sharp, acute character. This malady continued for two years without much change, but one year before I saw him he had been compelled to give up work on account of pain and weakness in the arm. The muscles of the shoulder blade were decidedly atrophied. There was a slight rhythmic tremor of the right hand when at rest, but it was not increased by efforts at voluntary motion of the part. He never had any other symptoms of lead poisoning, and he did not exhibit at any time a blue line on the gums. He was somewhat dyspeptic, but his general health and strength were good. Walking gave rise to trembling of the shoulders and pectoral muscles, and caused the tremor in the hand to become greater and oscillatory (pendulum movement). He also complained of shooting pains through the head, and stated that he always had headache after eating. He occasionally had tinnitus aurium. In talking he felt as if something were catching him in the throat; there seemed to be a laryngeal spasm which affected his speech. While standing, there appeared, upon pressure with the finger, to be a tension involving all the muscles of the right side of the body, but varying in amount. This was increased when he walked, and, owing to this muscular contraction, he was drawn over somewhat to the right, and the great toe and the next two toes on the right foot were drawn towards the sole. The ribs upon the right side were pulled together, as if the intercostal muscles were affected by

spasm. When the abdominal or thoracic muscles were struck on the right side there was an unusual contraction of the fibres; this local spasm was not well marked on the left side. The right foot dragged in walking. The right thumb was drawn into the palm of the hand, but this relaxed when the patient went to bed; while walking, however, the thumb muscles contracted so firmly that the nails frequently cut the palm of the hand.

The urine was not albuminous. O. D. Ophthalmoscopic examination showed deep physiological cupping with pulsation of veins. Cribiform fascia sharply defined; outlines of disk somewhat indistinct. Relation of veins to arteries normal. O. S. Cupping deeper, otherwise the same as the preceding. He had no difficulty in swallowing, but had been subject to pyrosis and vomiting.

He has been taking, since October 4th, elixir quiniæ, ferri, et strychniæ phosphatis, a drachm thrice daily; with cod-liver oil, a tablespoonful, after meals. On the 25th of October, it was noted that his digestion had improved. The grip of both hands was alike, and satisfactory as tested by the dynamometer. The trembling was much less marked. The right leg did not drag in walking. The muscles of the right side now gradually lost their condition of tonic contraction, and the large tremor had disappeared by November 1st. He had so greatly improved that he could read the newspaper, which before was rendered impossible by the shaking of the paper by the hands, the left arm being shaken by the active movements of the right. He said that he felt very well until he ate his meals, after which he was liable to regurgitation, headache, and pain across the shoulders.

We find now that the improvement has been permanent, and that he really seems to be getting well.

This case, you perceive, was marked by a slight and quite equal general atrophy confined to one side, but most marked in the arm, neck, and shoulder; by distinct tonic contraction of numerous muscle-groups; by exaggerated reflex motility. Except in the fact of being one-sided, the case corresponds to the picture of amyotrophic lateral sclerosis drawn by Charcot's master hand. There is, of course, no reason why the disease may not exist on one side only, but I never saw such a case before.

There is, also, or was, fibrillar muscular contractions, and a fine, constant tremor, not always found in this disease, while the conversion of this trembling into large, sweeping, pendulum-like swings of the right arm during walking, and then only, is also curious and most unusual. We are at once reminded that the swing of the arms during walking is normal, and that therefore these singular convulsive exaggerations of a natural act are, so to speak, provided for in our locomotor mechanism, and are of the nature of one of the forms of functional spasm, which I

described very fully in the *American Journal of the Medical Sciences*, October, 1876.

I can hardly regret that the great gain made by our patient should have partly spoiled the interesting clinical picture of disease he presented but lately. Even yet there is much to notice. You observe as he stands that the facial muscles on the right side are drawn into triple curves about the right angle of the mouth; that the occipito-frontalis is slightly contracted all the time, so as to give a queer, one-sided expression of surprise. At the same time the head is bent to the right, the right shoulder pulled down, the trunk flexed to the right, and even bent on the pelvis. Note also the slight halt on the right leg; the general wasting of the arm, face, and shoulder; the absence as yet of like loss in the leg. The tremor of the arm is very visible, but walking no longer exaggerates it into large spasm, as it once did.

There can, I think, be no doubt that this case is due to disease both of the lateral columns and of the gray matter of the anterior columns, and that the permanent basis of the trouble is a sclerotic alteration of portions of these regions; neither have we any reason founded on experience to hope in such a case for any result but a gradual extension and deepening of the disease, until death ends the long torment after years of sickness.

We have here, it is true, a case of one-sided disease, an unusual form of the malady, and also there does seem to have been a gain so great as to shake one's confidence in the absoluteness of the diagnosis. There are, however, two points to which I would like to call your attention: The man was thin, feeble, anæmic, ill fed. He was ordered a full and systematic diet, and was given malt extract, cod-liver oil, iron, and arsenic. With the gain in general health there has been a very remarkable improvement in the symptoms believed to be due to the spinal malady, and this is, I think, a not uncommon case, and is competent to explain almost all of the gain by treatment which we are able to show in these terrible sclerotic alterations of the spinal cord and brain. I do not mean to assert that sclerotic changes in the cord are never cured, but I incline to think that when once well developed the most we dare hope for is an arrest of the disease, and I certainly as yet have never seen a cure in a typical case of advanced posterior sclerosis. I am even willing to go further than this and to say that while I have seen posterior sclerosis (locomotor ataxia) — and I use this as the type — arrested, and have seen it remain unaltered for long periods, reaching in one case to twenty years, I have never been assured that such arrests were due to the therapeutic means employed. The appearance of an exceptional therapeutic success in single cases must always awaken doubt. Yet the very fact that such arrests do occur spontaneously must ever encourage us to hope that we shall some day learn to control the condi-

tions which must be present in order to insure the permanent checking of the malady.

I have alluded above to the fact that attention to the general health offers the best chances of helping sclerosis in all its forms, and that on this account more is to be hoped from the use of change of air, cod-liver oil, malt extract, and the mechanical tonics, such as massage and electricity, than from drugs supposed to have a more specific value.

Another reason for the false encouragement to be had at times out of the clinical history of scleroses of the cord, and especially out of locomotor ataxia, is the fact that besides the definite sclerosis, with the equally definite mischiefs it causes, there is another coincident element of trouble which varies. This is probably a congestive state, and may with reason be supposed to exist in and about the sclerotic patches, and perhaps elsewhere. I think this element of ataxic cases has been quite too much overlooked, but to it we must turn for an explanation of the sudden increase or lessening of symptoms, and to the false appearance of gain in many cases of posterior sclerosis. I have over and over seen cases in which there was for a time complete ataxy of both arms and hands, so that no useful motion was possible, and I have seen this condition almost entirely disappear for months or even years. In one gentleman, now in my charge, this loss and gain has taken place twice, and each time there has been left a larger residuum of permanent mischief.

Whatever be the varying element of trouble in posterior sclerosis it is influenced largely by exercise, which, whenever it is extreme, is apt to be hurtful to such cases. This is why some ataxics are always best on rising from the night's sleep, and why, especially in the earlier stages of ataxia, long periods of absolute rest are so useful. I have already described elsewhere the influence of repose on some of the phenomena of this disease, and it is perhaps enough, here, to remind you that I have over and over seen the neuralgia of this disease pass away permanently, or for long periods, owing to rest in bed for two months.

A CASE OF INVERSION OF THE UTERUS OF NINE MONTHS' STANDING.¹

BY E. H. STEVENS, M. D., CAMBRIDGE.

MRS. C., aged twenty-two years, French Canadian, was first seen by me September 18, 1876, when she presented the following history: She menstruated for the first time at the age of thirteen years, and continued regular and in robust health. She married at the age of twenty. Eight months afterwards she became pregnant, and went to full term. She first began to have pains January 18, 1876. The pains

¹ Read before the Boston Society for Medical Observation, October 7, 1878.

continued five days and nights, being severe enough to prevent sleep. January 23d she was delivered of a large female child, the second stage of labor lasting sixteen hours. A physician was constantly in attendance during this time. Owing to the protracted nature of the labor, the harassing pains, and the loss of sleep, she had become much exhausted. Two hours after the birth of the child, the placenta not being delivered, the physician passed his hand into the uterus and removed it, at the same time stating to the family that "it had grown to the side." Very profuse hæmorrhage followed, with loss of consciousness for a short time. Severe after-pains occurred throughout the day, accompanied by spells of fainting. A constant oozing of blood continued, notwithstanding the free use of ice and other remedies. The pains subsided in twenty-four hours, but the flowing continued in a more than normal quantity for three days, being at times severe. At the end of that time the flowing became less, and the patient was comfortable, suffering only from weakness. A good supply of milk was secreted, and she was able to nurse her child. Three weeks after confinement she got up to have her bed made, when flowing again set in, lasting with more or less severity for about three weeks. After this time there was but little discharge, and she began to gain strength. She sat up with her wrapper on when her baby was ten weeks old, and was very soon able to be about the house and attend to her domestic duties. From that time up to the present she has had an almost continuous sanguineous discharge, to control which various kinds of treatment, both local and general, have been tested by different physicians familiar with the case. One had applied cotton saturated with a preparation of iron, which controlled the hæmorrhage for five weeks. Another, supposing the trouble to be falling of the womb, introduced a rubber ring-pessary. This she was wearing when I first saw her. Although able to be about the house and nurse her infant, her face and lips were of a chalky whiteness. Her appetite was good. At times she had trouble in seeing, and dizziness. A distinct murmur was noticed over the apex of the heart, which was increased on slight exertion. On making a vaginal examination, a tumor as large as a small orange was found low down in the vagina, and resting on the perinæum, easily movable in all directions. It could be freely handled without causing pain, the surface being rough and having a spongy feel. If scraped with the finger this roughness came off, leaving a smooth and shining mucous membrane underneath. After a somewhat careful and prolonged examination I satisfied myself that I had to do with a case of inversion of the uterus.

The next day, September 19th, Drs. J. L. Hildreth and H. E. Marion saw the case in consultation, and verified my diagnosis. She being at once put under the influence of ether, and laid upon her back, with the

knees drawn up, the diagnosis was made absolutely certain by passing the right hand into the vagina and pressing up the entire mass, with the left hand pressing down from above the pubes. In this manner the absence of the fundus of the uterus could be easily made out. Instead of the fundus of the uterus a distinct ring could be felt, into which the finger could be pressed, and the outlines of the broad ligaments could be made out. An attempt at reduction was now begun in the following manner: The uterus was grasped between the thumb and finger, the fundus resting in the palm of the hand; firm pressure was made from within the vagina, while the left hand steadied and supported the uterus from above the pubes. The fingers of the hand within the vagina were used as a wedge to dilate the cervix, after the plan described by Dr. Emmet in a case published by him in 1868, in the January number of the *American Journal of the Medical Sciences*, page 91.

After one hour and three quarters the cervical canal was sufficiently dilated to allow the fundus to be pushed very nearly within the uterine cavity. The state of the patient was such that it was deemed wise to discontinue any further attempt at reduction at this time. The state of the organ had entirely changed; from being hard and unyielding, it had become soft and pliable, and apparently not more than two thirds as large. To secure what had been gained, a rubber air-bag was applied, the fundus being pushed up as far as possible. Reaction from the ether came on slowly, but in twelve hours the patient's condition was about the same as before the operation. The air-bag was kept in position sixty hours, being removed twice, and an injection of warm carbolyzed water used. In reapplying the air-bag care was taken to have the fundus pushed well up into the uterine canal. At the end of sixty hours ether was again administered, the patient being in a fair condition, the pulse being 120 per minute. Drs. Hildreth, Marion, and W. W. Dow were present, and rendered valuable assistance. On removing the air-bag the uterus at once dropped into the vagina, but could be pushed into the canal again, so that the condition seemed about the same as when the last operation was abandoned. For two hours I continued my efforts to reduce the organ when the fundus was entirely within the canal, the cervix coming together over it. It appeared to all present that complete reduction would be accomplished in a very short time. I was, however, obliged to desist on account of the patient's condition, she having a pulse of 160, with difficult respiration. Not wanting to lose anything we had gained, I determined to adopt Emmet's plan of passing sutures through the cervix, and thus keep the fundus within the uterine canal. Four deep, interrupted silver-wire sutures were passed through the neck of the uterus and twisted, bringing the sides of the cervix together. In two hours the patient had reacted from her ether, and was left comfortable. One hour and a half after leav-

ing the house a messenger came for me in great haste, saying that the woman was dying. I reached her bedside in a short time, to find her a little faint, but otherwise comfortable. The nurse reported that about one hour before very severe pains came on in the lower part of the abdomen, extending through to the back. They were described as like labor pains, but much more severe. After lasting three quarters of an hour something was felt to give way inside, when all pain suddenly ceased, leaving only faintness behind. This soon passed away, and she said that she had not felt so well before for months. The pulse was good. There was tenderness above the pubes. One eighth of a grain of morphine was ordered every two hours, with hot fomentations. At my next visit, six hours afterwards, the pulse was found to be good; micturition somewhat difficult; less tenderness than at last visit; no tympanites. She had vomited several times, and felt sleepy, but could not sleep. Morphine was administered less frequently, and fomentations were continued. On visiting her the next morning she was reported to have passed a comfortable night, getting several hours' quiet sleep; pulse less than 100, temperature 99° F.; very little tenderness over any part of the abdomen. She said that she felt well enough to get up. No vomiting since the previous evening. The stomach retained beef tea and milk punch. She had to wait some time before she could pass water. Morphine was discontinued. Not feeling sure that the uterus had replaced itself, although all the symptoms would warrant that supposition, I thought it best to wait until the next day before removing the stitches, when I could have assistance. Accordingly, on the morning of the 22d, Drs. Marion and Dow being present, ether was again administered, and the stitches were removed, when we found that the organ had entirely regained its normal position, the fundus being plainly felt from above the pubes. The cavity of the uterus, as measured by the Simpson sound, showed a depth of three and one quarter inches. From this time all hæmorrhage stopped, and she gained steadily. At the end of six days she was sitting up, and in ten days walked out, contrary to my advice. The following February menstruation appeared naturally. The family soon after moved to a distant part of the State. I learned by a letter from the husband, dated February 10, 1878, that his wife had a fine boy, born in January, and that she was in perfect health.

A NEW MICROTOME.¹

BY S. W. FLETCHER, M. D., PEPPERELL, MASS.

SEVERAL years ago, wishing to make some thin sections of animal tissue, and not having the educated hand, I set about devising an instrument for doing such work. The conditions to be fulfilled appeared to

¹ Shown to the Boston Society of Medical Sciences, November 30, 1878.

me to be : to attach the cutting blade to a carrier so arranged as to draw repeatedly the edge of the blade over the specimen with any desired inclination and in exactly the same course ; to prevent every part of the blade, except the edge actually cutting, from touching the preparation ; to immerse the object in alcohol or other preservative fluid whilst being cut ; and to approach the specimen to the blade to any desired extent, the whole instrument being made heavy and firm enough to prevent any considerable trembling under ordinary use. These conditions I have endeavored to fulfill in the following manner : —

X X, Figure I., is a wooden frame sixteen inches in length, eight inches in width, and five and a half in height ; to the top of this is clamped the wooden bar R R by means of the bolts 6 and 7, which pass

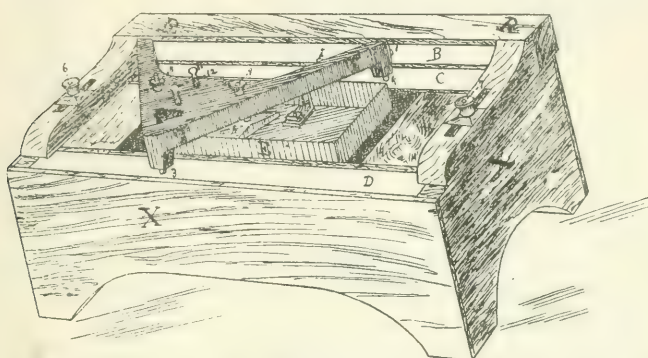


FIG. I.

through the slots cut in the arms which project from each end of it. B is a piece of thick plate-glass cemented to the side of the bar R R, and C and D are similar pieces of glass cemented to the top of the frame X X. In the centre of the frame is the brass pan E. Near the centre of this pan is a well, one inch in diameter and two inches deep. At one side of the well is a clamp 4, which by the screw 1 is pressed tightly against the specimen O to be cut. Over this pan is the iron tripod T T, beneath which is suspended a brass plate A by means of the bolts 8 and 9. This plate is made to incline more or less towards the glass plate C, and is fastened firmly in position by the set screws 11 and 12. By these any desired inclination can be given to the cutting blade, which is clamped to the under surface of the plate A. I have commonly used a wide Le Coulter razor blade for cutting. The legs of the tripod have ivory pins driven firmly into holes drilled deep in their ends ; these pins project one fourth of an inch, and their points, 3, 4, 5, rest on the glass plates C and D. From the sides of two of the legs ivory pins project in the same way, and their points, 1 and 2, rest against the glass B. The opposite sides of the well are grooved on their outer surfaces, and in these grooves rest brass guide pieces which

are firmly bolted to the frame X X, and connected with these guide pieces is a screw, the point of which presses against the lower part of the bottom of the well. The threads of this screw are forty-eight to the inch, and the circumference of its head is divided into fifty equal parts.

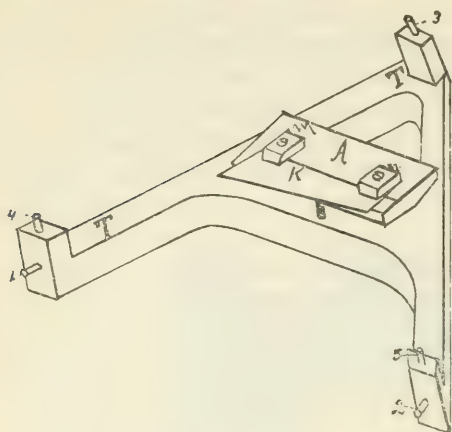


FIG. II.

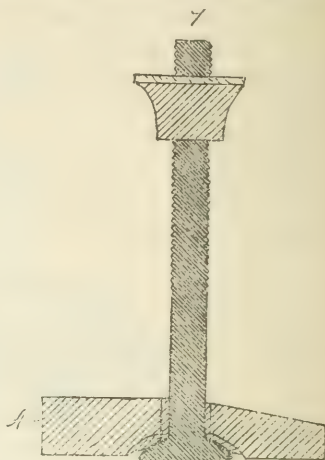


FIG. III.

Figure II. represents the tripod seen from below, showing the ivory points 1, 2, 3, 4, 5, the brass plate A, and the blade K fastened by the clamps m and n.

Figure III. shows the shape of the heads of the bolts 8 and 9, Figure I., and the manner in which they are let into the plate A.

Figure IV. represents a section through the pan E, showing the arrangement of the well W, clamp L, screw I for tightening the clamp, and screw F for raising the pan. H is a rubber tube, leading from the bottom of the well, for drawing off the alcohol in the pan after using the instrument.

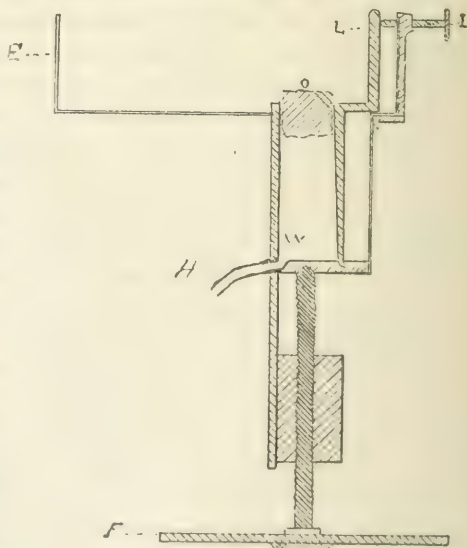


FIG. IV.

Figure V. represents the frame X X seen from below, showing the pan E, well W, screw F, rubber tube H, and brass guide pieces g g, and the manner in which they are attached to the frame.

The ivory points being well oiled, fill the pan with alcohol, so as to cover the top of the specimen O; place the tripod over the pan, and as

far to the left as possible ; turn up the screw F until the top of the object to be cut reaches the blade ; shove the tripod forward from left to right, and the blade will shave the top of the preparation ; draw the tripod from the glass B for half an inch, or raise the leg of the tripod resting on D half an inch ; it can then be pushed to the end of the glass plates from which it started without the knife touching at any point. Now let the tripod approach the glass B until the points 1 and 2 touch the glass ; turn the screw F so as to elevate the pan more or less, according to the desired thickness of the section ; again repeat the moving

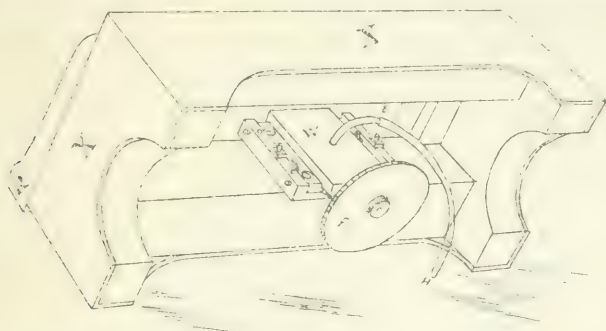


FIG. V.

of the tripod as already described, and a section is obtained of uniform thickness and of any desired thinness the blade is capable of cutting. With a well-hardened specimen and a very thin, sharp blade sections three fourths of an inch wide, one inch long, and $\frac{1}{2400}$ of an inch thick can readily be made. Very delicate objects need to be imbedded in wax or paraffine ; ordinary ones are held by the clamp L without any such preparation.

The whole instrument weighs about sixteen pounds, and costs about twenty-five dollars, not including the blades. The cost of four or five blades is not far from five dollars, or one dollar each.

RECENT PROGRESS IN FORENSIC MEDICINE.¹

BY F. W. DRAPER, M. D.

Cases of Interest from a Medico-Legal Point of View. — (1.) A Norwegian sailor, twenty-five years old, was admitted to the Bristol (England) Royal Infirmary,² with the following injury : He had received a penetrating wound of the brain, inflicted with an ordinary clasp knife with a blade three inches long and seven eighths of an inch wide ; the blade did not lock, and its whole length entered the brain, piercing the skull in the squamous portion of the left temporal bone, through a thickness

¹ Concluded from page 225.

² Medical Times and Gazette, September 28, 1878.

of a little more than one eighth of an inch of dense bone, and in its passage through the brain dividing the left middle cerebral artery half through, about an inch from its origin. The hæmorrhage was free from the external wound. There were convulsions confined to the left side of the body; the pulse ranged from 100 to 188; six hours after the injury the breathing took on the Cheyne-Stokes character. Death occurred twenty-one hours after the wound.

(2.) The poisoning of a new-born child with *nux vomica* must be reckoned an unusual occurrence in forensic medicine, other methods of infanticide being more common because more easily accomplished. An instance of infanticide by *nux vomica* is recorded in the *Vierteljahrsschrift für gerichtliche Medicin*.¹ A young woman gave her new-born illegitimate child a teaspoonful of the powdered drug in some chamomile tea. The child had convulsions, and died in two hours. The body was then thrown into a ditch; it was discovered after three days, and was submitted to a medical examination. Cadaveric rigidity was still very strongly developed. The viscera of the thorax presented the appearances of asphyxia. The abdominal viscera were not remarkable. A chemical examination of the stomach, liver, and intestines was made, but not the slightest trace of strychnia was discovered. There was no doubt of the cause and manner of the death, for the mother confessed her crime.

(3.) Professor Friedberg, of Breslau, reports a case² which he considers as the only one of its kind on record. A woman taken in labor with her third child sent for an unlicensed midwife whom she had engaged to attend her. At about midnight this midwife discovered a hand presentation; she made repeated violent traction on the hand and arm during the next two hours, at the end of which time the arm came away. She then introduced her hand, and worked it around for about five minutes, causing great pain to the mother, who, unable to bear it longer, sprang out of bed. While the patient was sitting on the edge of the bed the child was rapidly and easily expelled without any assistance. The case became a subject for judicial investigation. An autopsy of the child's body was made, at which it was determined that the infant was mature, strong, and healthy. The left arm and scapula were separated from the body with much laceration of muscle and effusion of partly coagulated blood. The left ribs, from the fifth to the ninth, were fractured near their anterior ends, the superjacent muscles being much bruised. The lungs sank in water, and no air issued on dividing them under water. The necks of the seven upper ribs were broken. Professor Friedberg concluded that the child's death was due to hæmorrhage and contusion, the result of injuries received while it

¹ London Medical Record, vol. xxv., December 15, 1878.

² Vierteljahrsschrift für gerichtliche Medicin, April, 1878.

was still living, though before it had breathed, the latter point being determined by the coagulated state of the blood in the neighborhood of all the lacerations, while the separated arm was swollen by effused blood, and was of a color indicating obstruction of the circulation during life.

(4.) Dr. T. MacLoughlin, surgeon of the Inman steamer *City of Chester*, gives the notes of a case of survival after eleven days' fasting.¹ The steamer sailed from Liverpool September 24th, and arrived at New York October 4th. When the hatches were removed the stevedores found beneath them a man lying, insensible, on the freight. After the taking of stimulants and small quantities of liquid food, he revived somewhat, and was sent to a hospital. He was greatly emaciated, cold, and nearly pulseless. After five days' careful tending he was convalescent.

His story was that he had secreted himself as a stow-away in the hold of the vessel on the evening before sailing. He had nothing to eat or drink during the whole voyage. He found some salt in the hold, of which he took about two handfuls. He had in his pocket a small glass flask; from this he said he drank his urine each time he voided it. He felt hungry until the second day only; after that there was intense thirst for four days. He shouted for help each day, until at length he became insensible, and remembered nothing till he found himself in the hospital. [The duration of the abstinence in this case is shorter than that recorded in a few other instances, wherein the sufferers survived enforced fasting; but considering the circumstances of confinement under closed hatches, the authenticity of the observation, and the remarkable means taken by the patient to relieve his hunger and thirst, the account deserves mention. — REP.]

RECORDS OF THE BOSTON SOCIETY OF MEDICAL SCIENCES FROM DECEMBER, 1877, TO FEBRUARY, 1878.

JAMES J. PUTNAM, M. D., SECRETARY.

TUESDAY, DECEMBER, 18, 1877. — DR. BOWDITCH read a paper upon the *innervation of the apex of the frog's heart*, to be published elsewhere at length.

It had been found by Merunowicz that when a ligature was placed round the ventricle of the frog's heart, the portion containing the apex continued to beat independently of the rest, from which it had been concluded that this part has a distinct nervo-motor apparatus of its own. Bernstein, on the contrary, had found that when on a living frog this portion of the heart is separated from the rest by a strong pinch, which crushes without cutting the tissues, it ceases to beat rhythmically, though it will still respond to stimulation from without.

¹ *Lancet*, November 2, 1878.

This inactivity might possibly be explained by supposing it to be due to the inhibitory action of the bruising, in which case it would pass away after a time. In order to test this point Dr. Bowditch had repeated the experiments of Bernstein, but had kept his frogs alive for a longer time, in one instance upwards of twenty days, after the operation. In every case but two the observations of Bernstein had been confirmed, and in these he showed reason for believing that the apex had begun to beat again as a result of the reëstablishment of the nervous communication between the upper and lower half.

DR. AMORY asked if, in the experiments of Dr. Bowditch, the supply of nutrient fluid was not cut off from the apex of the heart by the pinching.

DR. BOWDITCH replied that the frog's heart was capable of nourishing itself rather differently from that of other animals, namely, by imbibition. In further reply to Dr. Amory, Dr. Bowditch said that he considered it as uncertain whether in fact the rhythmical movements of the heart might not occur independently of motor ganglia; also, that the dilated condition of the heart in these experiments was not due to the engorgement of the muscular substance with blood, as was evident from the fact that the contraction could be brought about readily by stimulation from without, and further, that no such engorgement occurred unless the endocardium was ruptured.

In reply to Dr. Jeffries, Dr. Bowditch said that the muscular fibres were apparently actually crushed at the point pinched, though he had made no examination to test the question.

DR. PUTNAM spoke of the fact, which had been noticed by himself and one or two others, that when objects are regarded through the microscope by the left eye the color appears brighter, while at the same time the form and other peculiarities of the object are studied and its motions followed with less ease, than with the right eye. He believed it to be due to the same cause that Helmholtz has assigned for the fact that the colors of the landscape look brighter when the head is turned on one side.

In reply to Dr. Bowditch, Dr. Putnam said that he did not think that the phenomenon was one of fatigue and rest, since a return to the use of the right eye was not attended with a renewed brightening of the field, certainly not to the same degree as in the other case.

TUESDAY, JANUARY 15, 1878. — DR. PUTNAM read a paper upon the *physiological position of the so-called motor centres of the brain*. The so-called "motor" centres were explained to be the seat, not of exclusive representation of the muscular system of the body, but of their "predominant representation" in the sense of Dr. Hughlings Jackson, that is, the parts of the cortex which stand most directly in connection with the motor nerve tracts of the *crus cerebri* and spinal cord.

Similar centres of "predominant representation" exist, no doubt, for the nerve tracts concerned in the transmission of impressions of sight, hearing, etc., and in fact the cortex may, speaking roughly, be regarded from the physiological point of view as consisting of a number of cones, having a common base but separate apices, the overlapping parts of the cones corresponding to those parts of the cortex where the various special functions are correlated together, and which are not therefore exclusively sensory or motor in point of function.

The movements called out experimentally and through disease by excitation of the "motor centres" are relatively simple or fundamental in character, representing, as it were, the average of all possible movements of the part concerned, and are not the movements which are characteristic of the highest efforts of the will, but are rather, one might say, such as are relatively automatic so far as the individual is concerned.

MR. C. S. MINOT gave an account of his experiments on the exhaustion of muscle made last year in the physiological laboratory of the Medical College.¹ The object of the experiments had been to determine *in what manner the exhaustion progresses during tetanus produced by secondary induction currents.*

By means of a very complicated apparatus it was possible to regulate with exactness, first, the duration of the periods of irritation; second, the number and strength of the stroke sent through the muscle per second; and, third, the distribution of the intervals of repose during the experiment. The muscle investigated was the gastrocnemius of pithed frogs.

The results of the extended experiments may be summarized as follows: the muscular contractions produced were found to depend upon two hypothetically assumed variables, namely, the irritability and the degree of exhaustion. The magnitude of these quantities was found, as far as the experiments are conclusive, to increase with work and diminish with repose. Thus, in a perfectly fresh muscle a given submaximal irritation produces an incomplete contraction, but causes a great increase in the irritability, and adds a little exhaustion, so that the next contraction following upon the same strength of irritation is higher than the previous one, and so each contraction is greater than the preceding until a certain maximum is reached.

Every series of contractions beginning with the muscle in a fresh condition increases in height at first. This phenomenon occurs equally when the muscle performs a series of twitches (Zuckungen), or when it makes a tetanic contraction, and is probably essentially identical with the "Treppe" described by Dr. Bowditch in his memoir on the tip of the heart. This peculiarity may be simply termed the ascent; it has hitherto not been recognized as one of the essential phenomena of the functional activity of muscles. It marks the period during which the increase of irritability outweighs the exhaustion. After the maximum is reached, the contractions begin to fall off, because the accumulated exhaustion gradually obliterates the effects of the increased irritability.

This progressive exhaustion has long been known and often investigated. Whenever a muscle repose it is restored to a fresher condition, so that the contractions become higher; or it may even be so very far restored that it arrives at the beginning of the ascent, and the effect of its increased irritability is eliminated. There are many interesting points which must be omitted in this abstract, but it seems desirable to emphasize the fact that a certain amount of work, instead of exhausting the muscle, puts it in a condition to do a greater amount of work in response to the same strength of irritation.

The difference between tetanus and a series of single contractions or twitches is merely one of time, that is, of the length of the interval between the single shocks. This Mr. Minot endeavored to prove by detailed comparisons.

¹ See Journal of Anatomy and Physiology.

Finally, it is to be added that when a muscle is made to contract it does not regain its original length completely unless elongated by exterior force, a muscle not being very elastic, as is commonly supposed, but, on the contrary, exceedingly plastic. The rate at which a muscle lengthens out again diminishes as the height and number of the contractions increase. Hence it is that when a series of induction shocks follow one another through the muscle at regular, short intervals, they at first produce muscular twitches, but afterwards, when the elongation of the muscle is slower, they apparently fuse together and form a tetanus. The fact that muscles do not naturally elongate of themselves explains the distortion produced by paralysis of one side of a limb, for then the muscles on the sound side contract and never elongate completely, because the antagonistic muscles, which normally pull them out again, are thrown out of action.

In conclusion, Mr. Minot expressed his thanks to Prof. H. P. Bowditch, through whose kindness he had been enabled to carry out these investigations.

In reply to a question from Dr. Putnam as to whether anything corresponding to these phenomena is observed under normal conditions, Mr. Minot referred to the increasing irritability of the eye which follows the opening of the lids after sleep.

DR. GARLAND asked, with reference to an expression used by Mr. Minot, whether it was proper to speak of muscles as lengthening by virtue of their elasticity.

MR. MINOT thought the word could be used in this negative as well as in a positive sense.

DR. BOWDITCH spoke of the explanations given of muscular contraction by Weber, Fick, and others, according to which the elastic properties of a muscle in the relaxed and in the contracted state are quite different.

DRS. JAMES, BOWDITCH, and GARLAND discussed the question as to whether the elasticity of the stretched connective tissue might help to lengthen a muscle shortened by contraction.

The form of muscle best adapted for quick and for heavy work respectively was discussed by DRS. CURTIS, JAMES, and BOWDITCH.

DR. CURTIS spoke of Dr. Bowditch's observations on the height and weight of school-children of different ages, and suggested that the frequency of occurrences of lateral curvatures of the spine in girls may be due to their relatively great weight, which seems to be largely the result of a development of fat.

THE ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

THE session this season, which was held at Albany on the 4th, 5th, and 6th of February, was one of the best attended and most attractive that have been held for some years past, the papers, as a rule, being of greater scientific and professional interest than those usually presented at the meetings of the state society. The following are the principal officers elected for the ensuing year: president, Henry D. Didama, of Syracuse; vice-president, Nathaniel C. Husted,

of New York; secretary, William Manlius Smith, of Manlius; treasurer, Charles H. Porter, of Albany.

The President's Address. — One of the principal features of the meeting was the able address of the president, Prof. D. B. St. John Roosa, which was delivered on the second evening in the assembly chamber of the new capitol, just opened, the ordinary sessions of the society being held in the old assembly chamber. His subject was *The Relations of the Medical Profession to the State*. He regarded the system in our law that allows able and zealous lawyers to coach and pay their own experts, until they have made honest partisans of them, as vicious, and expressed the opinion that the State should summon and should pay experts, who should act as associate judges, to aid the real judge in getting the truth before the jury. The plaintiff and defendant should undoubtedly have the right of putting their case before the medical experts, and exercise a choice in selecting them, but the medical man should receive his honorarium from the State, and should never be put in the position, as an expert, of being a witness for one side.

With regard to the matter of suits for malpractice he said: "To accuse lightly a man of being a liar or a thief is still considered a disgrace in any society in our land, but a doctor is imputed with malpractice in as free and easy a manner as the most trifling peccadillo is charged upon a servant. But we, as a profession, should first clear ourselves from any complicity in this kind of detraction before we turn upon those who lightly bandy charges against medical men. If each of us would ever guard his brother's honor as his own, and promptly avow a disbelief in the charge of malpractice which is so frequently brought to him by a patient who is about to change his physician, the flippant tone often observed in society in regard to the services of medical men would be changed to one of respect. There is need for a remedy for some of the worst features of these suits for malpractice. One of the States of our country, which is always in the van in any progressive political or social movement, has already passed a law which does away with the system of coroners' juries, as it now obtains in New York. By this new law of Massachusetts the office of coroner is abolished. In his stead is a medical examiner, and not until his investigation as to the causes of death is ended is there any calling upon the civil power, which then appears, if necessary, in the form of the district attorney and a justice. In our State the coroner may not be even a physician, and he may be a very ignorant man, while the coroner's jury is usually obtained in the easiest way possible. When we remember that serious medical questions are very often involved in the decisions of such a coroner and such a jury, — questions affecting the reputation and freedom, perhaps even the life, of a physician, — we do not wonder that one State has at last done away with the bad system to which New York still clings."

The part of the address devoted to the subject of medical education was admirable, and in the course of his remarks upon it Dr. Roosa said: "In the State of New York, at an early date, there was an attempt at a medical college, which should be a department of King's College, now Columbia. In this the European idea of responsibility of the faculty to a *senatus academicus* was a feature; but this state of things did not continue, and to-day not one of

the leading medical colleges of the State is anything more than a first-class educational establishment, owned and practically controlled in all its details of financial management and appointment of professors by a body usually of seven men. They are at the same time proprietors and teachers. . . . It is true that in some of these colleges there is a titular connection with so-called universities, but he who makes the acquaintance of the managing boards of these institutions soon finds that they have an actual contempt for the idea that it is any part of the duty of a board of councilors or regents to look after the characters or acquirements of the men whose diplomas they are signing. It is greatly to the credit of the medical colleges of this State, however, that they have maintained medical teaching at a high standard, in spite of such a system and such an indifference and hostility as have been delineated. . . . Whatever may be proper for England or Germany, the United States are not yet ready for an alliance of medicine with the state. Neither do I believe that this society or any other society can successfully undertake the supervision of the medical colleges. . . . But observe what has been done by the president of Harvard University. With great ability and far-sightedness he has brought its medical school into close and responsible relations to his board of trustees, as a part of his scheme of raising a college to the dignity of a university. He has taken it out from its independent position, and made it, like the academic, law, scientific, dental, and theological departments, a part of a whole. That once done, the professors being independent of the favor of students, the existence of the school no longer dependent upon numbers, all needed reform became possible. Harvard has led where we must sooner or later follow.

"The University of Pennsylvania has also taken a step, although not a very long one, in the same direction, and the medical college at Syracuse adopts the Harvard system. The medical department of Union University also requires a preliminary examination.

"Anatomical, chemical, and physiological chairs, laboratories in colleges, and clinics in hospitals, should be properly, although not extravagantly, endowed; so that medical schools may be maintained even without excessively large classes. . . . Our colleges must be made better, then, by being considered as one of the objects of philanthropic aid, as well as art-galleries, observatories, and schools of science and of theology."

Dr. Roosa claimed that physicians should have a much larger share in the management of all institutions for the care of the sick than is now the case. "The history of an average business career," he said, "is not so flattering that the class which represent it can afford to claim an exclusive knowledge of how to manage hospitals and asylums. The record of the management of the army hospitals during the civil war, by physicians and surgeons of the army of the country, is a complete answer to those who would put away medical men from the care of their own."

Under the fifth head he said that although we may not ask the state to endow medical schools, we may certainly expect that it will protect its citizens from well-defined quackery. "It is the bounden duty of a government that cares for the welfare of its inhabitants," he continued, "to see to it that no one is allowed to prescribe for diseases who has not furnished evidence of a

satisfactory knowledge of anatomy, physiology, and chemistry. It should interfere to prevent the sale of so-called patent medicines and of adulterated medicines and food. What is wanted is a board of examiners, made up of the best men from the colleges and the profession, who shall determine, not the orthodoxy of a candidate as to the doses of drugs or the uses of cold water and vegetable medicines, but as to whether he has been well grounded in the structure and functions of the human body, the remedies for poisons, the rules for action in emergencies, and the principles of diagnosis, — a knowledge of which will at least protect his patients from scandalous malpractice."

When the public exercises at the capitol were concluded, the annual banquet of the society was held at the Delavan House.

Jaborandi. — One of the papers which attracted most attention was that by Dr. Fordyce Barker on The Use of Jaborandi and Pilocarpine in the Treatment of Albuminuria and Convulsions. He first described the effects of these agents on the system, effects which are known to be nearly constant and uniform, which are produced by no other medicine, and which naturally suggested the theory that the drug would prove useful in diminishing the œdema and eliminating urea in albuminuria. It may be relied upon to excite excessive salivation and profuse diaphoresis in a very short time after its administration. Hence it has been assumed that by this transudation urea in large quantities would be eliminated in the saliva and sweat. The author did not consider this to be established as a fact, by either experiment or clinical observation. When an agent is sure to produce the specific effect anticipated, one is tempted to rest satisfied with this action, without carefully noting whether any real benefit occurs to the patient from its use. In addition to the excessive salivation and diaphoresis, there is often a hypersecretion of nasal and bronchial mucus. The pulse is always quickened, sometimes forty or fifty beats in a minute, and at the same time its force is weakened. The face is at first flushed, but when the sweating commences it becomes pallid, showing that the sweating is not due to the excess of blood sent to the skin. It seems to paralyze, to a certain extent, the vasomotor part of the nervous system. It often produces headache, drowsiness, and haziness of the vision. After the sweating period, languor and debility persist for some hours. It does not increase the renal secretion.

Several cases have been published in which, after the action of jaborandi, patients suffering from albuminuria have been apparently benefited; but Dr. Barker did not regard the evidence of this to be conclusive. He then gave an abstract of the history of seven cases which he had seen in consultation.

CASE I. In the first of these the patient was in the seventh month of pregnancy, and had extreme and universal œdema, but no other symptoms, except debility. The urine was normal in quantity, and contained no albumen. Dr. Barker suggested a trial of jaborandi, which at first caused a decided decrease in the amount of fluid; but, even while the patient was taking the medicine, the œdema returned. The urine then became diminished in quantity, and was found to be albuminous, while the patient suffered from headache and extreme languor. The action of the medicine had prevented her from sleeping. She was then treated by elaterium, infusion of digitalis, acetate of potassa, and an exclusive milk diet. The œdema and albumen entirely disappeared some days before her labor, which was normal in every respect.

CASE II. In the second case a primipara, seven and a half months pregnant, and apparently perfectly well, was, without premonition, seized with convulsions. She was treated by calomel, stimulating enemata, cold applications to the head, and chloroform inhalations, while labor was induced and delivery completed by turning. After the delivery she remained in a stupor for about two hours, and then became conscious. Five hours after she had another convulsion, while asleep, and then three more in rapid succession. Another physician was called in consultation, who found the urine to be very scanty and highly albuminous. He advised that one quarter of a grain of pilocarpine should be administered hypodermically, and this produced most actively its specific effects. She had no more convulsions, but when Dr. Barker saw her the breathing was very labored, with loud bronchial, tracheal, and nasal râles, and the pulse was very rapid and feeble. She died an hour afterwards.

CASE III. In the third case a primipara, in the seventh month, suffered from headache and impaired vision, and her urine was found to be albuminous. After subjecting her to a course of mild laxatives and diuretics (the patient steadily growing worse, although not compelled to take to her bed), her physician decided to make trial of jaborandi. So violent was its action that two doses of it caused excessive and constant perspiration and salivation, and she became extremely weak. Dr. Barker then saw her, and found her cyanotic, and breathing with the greatest difficulty. He then discovered that the heart was displaced, and that the left pleural cavity was nearly filled with fluid. Only the upper part of the right lung was resonant on percussion.

CASE IV. In the fourth case the patient was awakened from a sound sleep, several hours after a perfectly normal and easy labor, and at once had a severe convulsion. A hypodermic injection of one third of a grain of morphia quieted her system, and she had no more convulsions. But eight hours after this her physician passed the catheter, and obtained but six ounces of urine, which was highly albuminous. He administered hypodermically one quarter of a grain of pilocarpine, which was repeated in six hours. Her symptoms then became so alarming that Dr. Barker was sent for, and on his arrival he found that her clothing was saturated with perspiration, while the nurse was incessantly occupied in wiping from the mouth and nostrils the fluids which were constantly oozing away. She was then dying from unmistakable signs of pulmonary thrombosis.

CASE V. In the fifth case the patient had no symptoms of albuminuria until after labor, which was tedious and had to be terminated by means of the forceps. She suffered for many hours from atrocious after-pains, and then had several convulsions. After this she was apparently doing well for two days, except that the catheter was required to empty the bladder. The urine, however, was sufficiently abundant, and it contained no albumen until the third day after parturition. As she had been taking diuretics and the bowels had been freely moved, her physician now gave a drachm of the fluid extract of jaborandi. The effects were so active and caused her to look so badly that the doctor had to be summoned hastily. Dr. Barker saw her the same evening, when she was dying, apparently from cerebral œdema and cardiac asthenia.

CASE VI. In the sixth case a primipara, in the seventh month, was taken

while at church with headache, nausea, and haziness of vision. Up to this time she had been well. Her bowels were acted upon by blue-mass and a seidlitz powder, but her symptoms were not improved. She was then treated by sweet spirits of nitre and the bitartrate of potassa, but as she still did not improve, a physician was called in consultation. He found the urine very albuminous, and advised a trial of jaborandi. Two hours after taking it, although the salivation and sweating produced by it were very copious, she had a violent convulsion, during which her tongue was badly bitten. Premature labor was induced, and by the time the delivery was accomplished (the patient being anæsthetized by sulphuric ether) she had had five more convulsions. After labor she became conscious, and the physician asked permission to pass the catheter. This she resisted with great nervous excitement, and the consequence was that a seventh convulsion ensued. She was moribund when Dr. Barker saw her, and died nine hours after delivery.

CASE VII. The seventh case was a melancholy one of great imprudence in a young wife, which brought on acute suppression of urine and convulsions. Jaborandi was given in a rectal enema, and in the opinion of her medical attendant, one of the most prominent obstetricians in New York, decidedly relieved the acute uræmia. Premature labor was then induced, and she appeared to be doing well for a few days, with the exception that the nausea was so persistent that she was supported only by rectal alimentation, when another imprudence apparently brought on peritonitis, and she died in twenty-four hours after.

In conclusion, Dr. Barker asked whether it might not be probable that the development of uræmic symptoms and albuminous urine in the first case, the great depression and exhaustion which followed its use in the second, the serous effusion in the pleural cavity in the third, the pulmonary thrombosis in the fourth, the cerebral œdema and cardiac asthenia in the fifth, and the convulsions in the sixth were not in reality chiefly due to the effect of the jaborandi on the nervous system and its modification of the constituents of the blood. He firmly expressed the belief that the utility of jaborandi in the treatment of puerperal albuminuria was more than doubtful, and that after convulsions its depressing influence, as well as its peculiar action which prevents sleep and the needed repose of the nervous system, renders it in these cases an unsafe and even really dangerous remedy.

(To be concluded.)

THE BUREAU OF PUBLIC HEALTH.

THE select committee of the two branches of Congress appointed to investigate and report the best means of preventing the introduction and spread of epidemic diseases have done so. They have reported a bill entitled, "A bill to prevent the introduction of contagious or infectious diseases into the United States, and to establish a bureau of public health." This was accompanied by a joint resolution continuing the committees of the two houses, and authorizing them to create a commission of eminent scientists to investigate yellow fever in the port of Havana, in regard to which we have more to say elsewhere.

The bill reported by the committee is that brought before the senate by Mr. Matthews, of Ohio, with some slight modifications, and embodies "the conclusions of the board of experts authorized by Congress to investigate the yellow fever epidemic of 1878."

This bill establishes a bureau of health, with a chief executive officer, to be appointed by the president, with the consent of the senate. He is to be called the director-general of health, and is also to be charged with the supervision of all matters connected with the marine hospital service; with the execution of all measures to prevent the introduction of contagious or infectious diseases into the country; with the enforcement of all quarantine regulations, of all laws for the improvement of the sanitary condition of the District of Columbia; with the duty of obtaining information of the sanitary condition of foreign ports and places, and of ports and places within this country, and of issuing weekly reports of the same, etc., etc.

In connection with this bureau of health the bill proposes to establish a board of health, to consist of seven members, to be appointed by the president, with the consent of the senate, whose compensation shall be ten dollars a day and reasonable expenses whilst sitting; the surgeons-general of army and navy to be *ex officio* additional members of the board, but without additional pay; the director-general to be *ex officio* a member and president of this board of health.

This board of health is to meet from time to time upon notice from the director-general, or upon its own adjournments, to frame all rules and regulations authorized or required by the bill, and to make such special examinations at any place within the United States as may be necessary to aid in the execution of the act.

We have given this brief outline of a bill which all medical men should read for themselves in full.

In general we cordially indorse the moderate tone and the conclusions of the report of the board of experts upon which this bill is based, and the bill itself is probably as good a one as we are likely to get before Congress, and very much better than a previous one which we took occasion to notice. If once in operation, improvements would undoubtedly suggest themselves from time to time. The appointment of the members of the board of health by the president has its advantages and disadvantages; it is perhaps well to put the responsibility upon one man, even though not personally qualified to select. Congress certainly should have nothing to do with such appointments. As we have before said, the pith of this or any kindred bill necessarily lies in its quarantine regulations, and in the manner of their enforcement. The regulations may be wise and the powers given under them necessary, as those in the present bill seem to us to be, and yet cause more harm than good to the country at large if administered by an over-zealous or negligent functionary.

The proposal to attach a medical officer to the consulate in foreign ports where epidemic diseases are prevalent is a very admirable one.

The field to be covered is in many respects a new one, in which very much is still to be learned, and the powers to be granted are immense, but some legislation in regard to epidemic diseases is imperative, and for our own part we have

more fear that all such will be defeated by the supposed interests of commerce than we have of the passage of a bill which in its inception may fall short of perfection.

REPORT OF THE COMMITTEE ON YELLOW FEVER.

IN accordance with the recommendation of the board of experts on yellow fever, the congressional committee on epidemic diseases has reported a joint resolution authorizing the appointment of a commission to visit Havana and to institute a scientific investigation into the causes of the prevalence of the disease at that port.

The commission is to consist of "experts, one of whom is to be learned in medical science, one a microscopist, and one a sanitary engineer, and all eminent for their scientific attainments."

The president is requested to invite the coöperation of the Spanish government in the examinations and experiments of the commission in furtherance of international commerce and the sanitary interest of mankind. The commission is also to visit such other places as the congressional committee shall direct, and to prepare a report for the next Congress.

The proposal thus placed before Congress is certainly one of the most important and practical steps that has yet been taken towards securing a correct knowledge of the causes that influence the origin and spread of yellow fever. The disease can be studied to much greater advantage in Havana, or other places where it prevails endemically, than is possible during the state of alarm and uncertainty that necessarily influence the correctness of diagnosis and observation during its epidemic prevalence.

In the form in which it has been reported, however, the resolution is disappointing in several particulars: first, as to the number of medical experts, which should not be less than three, as the possible death or sickness of either of those provided for by the resolution would seriously cripple the work; second, the rate of compensation is fixed at ten dollars per day and necessary expenses. Surely not much reflection will be required on the part of Congress to convince them that the same *per diem* rate that is frequently paid a temporary sergeant-at-arms of a committee is not proper remuneration for the high grade of scientific work pursued under circumstances of personal danger that will be required of all the experts, and that scientists capable of improving to the fullest extent the broad field of observation open to them cannot be secured for the inadequate compensation provided. Notwithstanding this defect, however, the spirit of scientific liberality which places labor that contributes to the amelioration of suffering and the increase of knowledge above a money valuation would secure the services of men well fitted for the duties required.

The last and most serious defect in the resolution is the transfer of the power of appointment of the experts from the president, as first provided for in the Harris bill, to the congressional committee; this is an error that we strongly desire to see corrected, and it needs but little argument to prove that the appointments, if made by the president, would probably be of a much higher

grade than if made by the committee, as the former will have much better opportunities of informing himself of the qualifications of the different persons suggested for the duties than the committee can possibly possess.

THE MEDICAL PRACTICE ACT IN ILLINOIS.

THE Illinois State Board of Health appears to be in danger of annihilation at the hands of the legislature. Two bills have been introduced: one, in the house, to emasculate the medical practice act, by repealing the section empowering the board to enforce the provisions of the law; and one, in the senate, to abolish the board of health. As the warfare against the board is made chiefly by those who, manifestly to legislators even, ought not to be allowed to practice at all, the bills are both likely to fail of passing. However, they have in the legislature a persistent if not a numerous following. Misappropriation of money and injustice in the granting of certificates to practice are charged against the board. Of course, if such charges are well founded, it is no argument in favor of repealing the laws under which the board acts. That mistakes at least have been made in the granting of certificates is probably true, and only natural; but the examinations of candidates for license to practice — such as had never graduated from a reputable college — have done the board high credit. No medical college in America has ever plucked so large a proportion of its candidates for graduation, and few, if any, have imposed a more searching examination.

Much opposition to the medical practice act comes from many good men, because physicians of more than ten years' practice in the State were exempted from the provisions of the law. The indignation at seeing large numbers of old charlatans — sores on the body medical — going on in their discreditable work unmolested, while excellent and competent physicians, by the accident of their youth or brief residence, were obliged to submit to what has sometimes seemed impertinent inquiry and examination, has, unfortunately, been vented mostly upon the board which has had to execute the law, rather than on the law-makers. This is having its effect at the present time.

So busy has the board been with the examination and licensing of physicians that it has been unable to do much other work. It has put into operation rules for the registration of births and deaths with county clerks; has supplied physicians with blanks, and the clerks with blank books; and all physicians and midwives, whether licensed or not, have been obliged to register their names, etc., in the offices of these clerks.

The reporting of all births and deaths is not by any means accomplished: the provision of the law requiring it is found to be difficult of execution. Indeed, it is frankly disregarded and defied by some of our best and most peaceful physicians, on the ground that it is unconstitutional to require medical men to do these things without compensation. They say the constitution declares that no citizen shall be deprived of his property without compensation, and a physician's time is his property.

One practitioner says his obstetrical cases since the beginning of the year

have been so numerous that should he report them all, with his poor and slow way of writing, it would take him a day or more to fill out the "stubs" and the certificates in the way prescribed. He reports none of them. Another invites prosecution by the board, that a test case may be made for a decision by the supreme court.

One good way suggested out of this difficulty — a difficulty that vitiates our vital statistics — is to compensate physicians with a small fee for each certificate of birth or death. Such a system of doing is in vogue in at least two States, and is said to result in a very complete and accurate report of births and deaths.

With all the defects in the two laws under which the board of health acts, and with all the short-comings and mistakes of this body, so far as the feeling of the profession throughout the State can be ascertained, it is overwhelmingly opposed to the abolition of the board, or the curtailment of its powers. If the profession could be heard to-day, its demand would be simply and only for a few amendments to the laws, that are demanded by the experience with their workings.

MEDICAL NOTES.

— We quote what follows from a letter received from our London correspondent: "You may be interested in learning that a bill is shortly to be introduced to reëstablish the '*tours*' with absolute secrecy. This measure is a very strong one, and it will be most interesting to watch its development. Such a course is quite contrary to our English instincts, and would stand no chance of adoption here, but circumstances are very different on the two sides of the channel. Our difficulty is less with illegitimate children than with the mismanagement and neglect of the large families of children among the lower classes."

— The eighth annual report of the New York Ear Dispensary opens with the following sentence: "The New York Dispensary is believed now to be second in importance to only one similar institution in the world, namely, the Royal Ear Hospital of London, which was founded as a dispensary in 1816." The Massachusetts Eye and Ear Infirmary is entirely overlooked, but it has issued its fifty-third report, and in it are given during the past year 2561 ear cases, while the New York Dispensary treated less than six hundred. It may be said that the Massachusetts institution attends to the eye also, and so is not for the ear alone. But the New York Dispensary treats the throat and teeth as well as the ear.

— A Russian lady, Madame Berlinsky, recently defended a thesis upon a histological subject before the Faculty of Medicine in Paris. At the close she was warmly congratulated by Professor Charcot, who expressed the opinion that women ought to be especially successful in the specialty of histology, which requires so much care and such delicate manipulation. Eleven ladies presented themselves for the winter matriculation examination of the London University under the new charter.

— According to the *Lancet*, Mr. Foster reports two cases of pronounced apoplectic coma, which were treated by the injection of twelve drops of a solu-

tion of ergotine, containing seven and a half grains to the drachm of vehicle. In both cases the coma disappeared soon, and recovery took place. The essential condition for the success of the treatment is that the injection be administered at the beginning of the attack, before there has been time for an extensive extravasation of blood. Mr. Foster recommends injecting the fluid between the muscles of the fore-arm, and not merely under the skin, where it is liable to excite suppuration.

— It appears that in the hospitals of Philadelphia there are at present nearly twelve hundred empty beds. This indicates the good health of the city and a full provision of such medical charity as the city needs.

— The details of the late endemic of diphtheria in the ducal family of Hesse-Darmstadt afford a remarkably strong proof of the contagious nature of diphtheritic poison. The *British Medical Journal* for January 11th contains a full report by Dr. Oertel, the attending physician.

— Professor Tardieu, of Paris, is dead. — The election of Professor Owen and Mr. Darwin to the Berlin Academy of Sciences has been approved by Emperor William. — There are six hundred and twenty-three medical students in Berlin during the present semester, a larger number than has ever before assembled in that city at one time. There are only three hundred and twenty-three medical students in Leipzig, one hundred and one in Erlangen, seventy-six in Kiel. — Bazin, the distinguished dermatologist of Paris, recently died at the age of seventy-one.

NEW YORK.

— The vital statistics for the month of January, 1879, do not present quite as favorable a showing as those of the same month a year ago. While this year there were 2120 births and 2695 deaths, last year there were 2462 births and 2254 deaths, which is a decrease of 342 in the number of the one, and an increase of 441 in the number of the other. There was, however, an increase of 72 in the number of marriages, and from this fact some hope for the future population of the city may perhaps be derived.

— For some time past a volunteer life-saving corps, consisting of three young men, with "Nan, the newsboy," as their leader, have been doing an excellent service in rescuing drowning persons along the East River docks, and lately Captain Paul Boyton, of British Channel fame, has interested himself in getting the youths properly equipped for their gallant work. Through his exertions the "New York Volunteer Life-Saving Society" has been organized, and more than eight hundred dollars have been contributed for the carrying out of its humane objects. Floats fitted up with all needful appliances have been provided at different points along the river front, and the Galvano-Faradic Manufacturing Company have offered to furnish the various stations with suitable electrical apparatus, as well as to instruct the members of the corps in its use. The whole number of individuals rescued from the water by "Nan" and his companions is no less than twenty-eight.

— Dr. George Gilfillan, one of the oldest physicians of Brooklyn, died suddenly of disease of the heart on February 5th. From an Irish exile, who landed here in 1828, poor, and without friends, he became rich and widely known and respected in the community. He began his practice in Brooklyn

in the cholera season of 1832, and lived to see what was then a mere village attain its present vast proportions. Up to the time of his death, which occurred in his eighty-third year, he continued in the active practice of his profession, and, as one of the obituary notices of him states, his generosity, geniality, happy temperament, and conversational charms will long prove delightful memories to hosts of his friends on both sides of the ferry.

— At the last meeting of the Academy of Medicine, Dr. John G. Adams read an eloquent eulogy of the late Dr. Jacob Bigelow.

PHILADELPHIA.

— The winter's work is nearly over at the colleges, the examinations beginning on the first of March. The classes do not show as great a falling-off from last year as was expected early in the session. The number of matriculants at the Jefferson is five hundred and seventy-two against five hundred and ninety-eight of last year. At the University the second-year class has one hundred and twenty-six out of the one hundred and thirty-two who commenced their studies one year ago, while the number of medical freshmen this term is one hundred and twenty-one. The friends of the new plan at the University say that it may now be considered established. The cause of true medical reform has nowhere more sincere friends and earnest advocates than can be found in Philadelphia, and at the next meeting of the confederation of American Medical Colleges in Atlanta, Friday, May 2, 1879, a strong effort will be made by Philadelphia delegates to induce the representatives of all the regular medical colleges to unite in a general advance all along the line.

— There are in this city several institutions which have been doing a good business by granting medical and other degrees *in absentia*. This diploma-selling has become notorious, and has had the effect of casting discredit abroad upon Philadelphia colleges in general, to the great injury particularly of the University of Pennsylvania, whose name has been closely copied in the titles, "The University of Philadelphia," and "The American University." Legislative committees have repeatedly investigated the charges, and indeed a resolution was finally passed revoking their charters, but the supreme court of the State decided that the legislature had no right to rescind these charters, as this can only be done through the courts. Within the last week *quo warranto* proceedings have been instituted, therefore, in our courts, and there is now a determination to accomplish something decisive that shall at last uproot this evil. The present mayor of Philadelphia, Mr. Stokely, has done much to abate this nuisance by publishing circulars describing the character of these institutions, which are sent out in response to inquiries that are being constantly received from England and the Continent particularly.

— Dr. J. J. Reese has been elected attending physician to Girard College, and Dr. I. Minis Hays to the corresponding office in the Institution for the Deaf and Dumb, both positions having been vacated by the death of Professor Biddle.

— A form of pneumonia characterized by typhoid symptoms, with little or no cough or expectoration, and unusually fatal, is now prevailing to some extent in this city. The deaths from inflammation of the lungs for the week

ending February 8th were forty-six, or nearly double the entire number from scarlet fever (nine), typhoid fever (two), diphtheria (eight), croup (seven) altogether, and almost equaling the number who died from consumption (fifty-six). This is thought to be without precedent in the annals of this city. The total mortality was three hundred and fifty-three, those from pneumonia being thirteen per cent. of the entire number. Twenty-five persons died from old age.

CHICAGO.

— Dr. John Bartlett has invented a new obstetric forceps, which was recently exhibited to the West Chicago Medical Society. It is specially designed for grasping the head when high in the pelvis, and for making traction in the direction of the axis of the superior strait, without disturbing the perinæum; in this particular it serves a similar purpose to the forceps of Professor Farnier and Dr. Hobbs. In Bartlett's instrument the shank is long and straight, and the two parts overlap each other when closed, like a pair of shears; the shank projects from the axis of the blades at an angle of perhaps thirty-five or forty degrees; the handles are large and strong, and project from the shank at the same angle, being thus exactly parallel to the axis and line of traction of the blades. Thus the operator may always know the direction of his traction by observing the axis of the handles. Dr. Bartlett believes they accomplish the same direct traction as those of Farnier, and in a much simpler manner. The overlapping of the parts of the shank make this part of the instrument occupy a very small space.

LETTER FROM WASHINGTON.

MR. EDITOR, — In my last letter there occurred some comments upon a recent investigation held by the advisory board of Columbia Hospital upon the surgeon in charge. Since its publication, the annual report of that hospital has appeared, and further reference to the subject seems to be proper. It would seem from this report that the investigation was due to the action of the board of directors, the advisory board acting simply under their orders; that no testimony was given except under oath, was reported verbatim by a stenographer, and is now on file, "open to inspection by all wishing to know the facts." This assertion should satisfy all interested in the matter, and is a much better mode of dealing with the subject than, as was suggested in my last, giving additional publicity to what should never have received so much consideration. Publicity was thought by the advisory board to be necessary, and is stated to have been complete; how much wisdom there was in this is very questionable, as, a charge once made public, the faintest suspicion of its possible truth is too apt to receive such confirmation in prejudiced minds which no amount of positive testimony can afterwards disprove, — a fact which our politicians know too well how to take advantage of. It is hoped there will be no more public investigations of medical men, at least until the importance and consequence of the same have been well and duly considered. The advisory board has sustained a serious loss by the resignation of Dr. N. S. Lincoln, but has obtained a valuable addition in the appointment of Dr. D. R. Hagner. One of the most marked evidences, shown

by the report, of the appreciation in which the hospital is held is the more than double increase of pay patients during the year over that of any previous year. Another significant fact is the recent election by the District Medical Society of two of the present incumbents to honorary positions, one as president, another as vice-president, the surgeon in chief and one of the board of directors being also placed upon the board of censors.

The report of the health officer, Dr. Smith Townshend, for 1878, just issued, gives a valuable series of tables on vital statistics as applied to the district. The question of the Potomac flats, comprising hundreds of acres of swamp, covered at times with fermenting sewage, and almost encircling the city by the water front, is made of the first importance for sanitary consideration. Since Congress controls the power for remedial aid, and since the nation has been recently so overwhelmed with sorrow at the ravages of yellow fever, it is hoped that the nation's representatives will legislate to Washington's advantage. One interesting feature in the tables of vital statistics is the comparison of the rates of mortality, susceptibility to disease, etc., between the whites and blacks (or colored) of the population. The colored comprise a little over one fourth of the entire number, and, as a rule, live in the more insalubrious sections. The whites furnish a little more than fifty-two per cent., the blacks a little less than forty-eight per cent., of the death-rates. Phthisis stands first among the causes of death, and with the blacks the female death-rate is a little less than one per cent. over the white, the male being three per cent. over the white. In pneumonia the colored race supply nearly two thirds of all the cases. Diphtheria ranks as fifth and scarlet fever as sixth among the prevalent diseases. Trismus nascentium is still recognized as of common occurrence, but does not obtain the prominence it had in previous reports.

The Clinico-Pathological Society, which was organized in 1865, comprised at various times some forty odd members, held its meetings regularly until 1874, and published its transactions in the *American Journal of Medical Sciences*, held its final meeting in December last; deposited its pathological specimens in the Army Medical Museum, its books and papers in the library of the surgeon-general's office; and with a historical review by one of the original members, and the converting of the funds of its treasury into a supper, adjourned *sine die*, the termination of as effective and working a medical society as ever was organized in the district.

In January there was organized in this city the Cosmos Club, for social intercourse, by some sixty-four members, four of whom are non-resident. It is intended to bring together on the same basis with that of any other social club persons interested in science or literature, and bids fair from its outset to serve a valuable purpose. The club is duly incorporated for "the advancement of its members in science, literature, and art, their mutual improvement by social intercourse, the acquisition and maintenance of a library, and the collection and care of materials and appliances relating to the above objects." President, Prof. S. F. Baird, Smithsonian Institution; vice-president, Dr. Jas. C. Welling, president Columbian University; secretary, Prof. E. S. Holden, U. S. Naval Observatory; treasurer, Dr. J. S. Billings, surgeon-general's office, U. S. A. Among the members are the names of men prominent in every branch of science at the national capital. The non-resident members

comprise the president and part of the professional staff of the Johns Hopkins University. Several medical men have been honored by being included in the list of members, as congenial to and in sympathy with the work of scientists. Everything that may conduce to draw men together socially, such as the periodicals, cards, refreshments, etc., and handsome and comfortably furnished rooms, has been very judiciously provided for by the house committee, and already men begin to look upon the club as a part of their daily life. We all know how scientists, as they become more and more engrossed in their work, are apt to draw out of general society, from a feeling that they are out of place; they miss the sympathy with their especial work which they can find only in such an organization as this, where it is understood, and where it must be a pleasure to be able to detail to an interested listener work done and in anticipation, and they are insensibly drawn out of themselves to take interest in the work of others, on an equally scientific basis. And so with doctors: it is preëminently the club of clubs for them; not, to be sure, for finding patients, but for enlarging their views, and affording them a suitable relaxation. Apart from all this, the ability to introduce a visiting friend to a social circle of scientists, well known by reputation throughout the country, and to honor such from other sections of the country, and to know them away from the lecture room, etc., is certainly a great pleasure.

W. L.

February, 1879.

SHORT COMMUNICATIONS.

A NEW METHOD OF TREATING DISLOCATION OF THE FEMUR, WITH FRACTURED ACETABULUM.

BY W. L. FAXON, M. D., QUINCY.

MRS. FAXON, aged thirty-five, wife of Dr. W. L. Faxon, of Quincy, Mass., was thrown from a buggy while driving, October 1, 1877. When taken up there were symptoms of dislocation or fracture of the right femur. Examination proved the existence of a fracture of the lip of the right acetabulum and dislocation of the head of the femur downwards and backwards, with about four inches shortening. The fracture of the lip of the acetabulum was so deep that there was no feeling of the head of the femur being raised in its passage over the broken edge of the socket. Dr. John H. Gilbert, of Quincy, assisted her husband in the first care of the patient. Dr. Samuel Cabot, of Boston, saw the case in consultation on the Friday following the receipt of the injury, confirmed the diagnosis, and recommended the use of the long Desault splint. It was tried, but the patient's condition — she being five months advanced in pregnancy, and troubled with constant vomiting from the time she was injured — led to its being abandoned. Her husband then prepared a bed of which the following is a description: —

An iron cot-bed, six feet two inches by two feet three inches, was floored over with inch board to make a bottom that would not sag; on this was put a hair mattress of three parts, the upper part being thirty-seven inches long, the middle section twelve inches, and the lower section twenty-five inches. Under the twelve-inch section a corresponding piece of the flooring was adjusted for removal. Surrounding the bed, its lower edge just at the top of the mattress, was a frame of board, six inches wide, with legs at the corners extending to the floor, and securely lashed to the legs of the cot. Across the bed at the bottom of the upper section of mattress was a piece of board the same width at the ends as the side frame, but hollowed in the centre to one inch in width. About four inches on either end of this cross-piece were left of the same width as the sides, for reasons that will appear. On the upper piece of mattress thus cut off from the rest three bags of sand were put, the lower one extending from side to side, and its lower edge just covering the hollowed edge of the

cross-piece of frame. This bag was long enough to reach the small of the back, and was loosely filled with about three inches of sand. The space above this broad bag was occupied by two bags, each reaching to the middle of the bed. The sand was thoroughly baked before being bagged. The patient was removed to this bed about ten days after the date of injury, by her husband and Dr. J. A. Gordon. The sand in the loosely filled bags was adjusted by pushing and drawing to fit accurately all the curves of the back. The cross-piece, with the sand-bag just riding up on it sufficiently to take the shape of the lower part of the body, prevented the patient from slipping down in bed, and gave as perfect counter-extension as was ever seen. On the twelve-inch section below the cross-piece was a bag eighteen inches long and some six inches in diameter. This bag was quite tightly filled, and only by hard pressure with the ends of the fingers was made to accommodate perfectly the upper half of the thighs. This bag was made to lie close to the cross-piece. Below this the twelve-inch section was covered with a pillow, as was the lower section of the mattress. To keep the right leg in position a bag of sand was placed on each side of it. To support the foot several small bags, from one pound to four pounds' weight, *tightly filled*, were used as occasion required. The body was supported and confined on the sides by four bags, one on the side of each hip, with the lower end pressed against the uncut portion of the cross-piece. This end of the bag was made by setting in a piece of cloth the whole size of the end, so as to allow of an accurate adjustment at the hip-joint. The upper end of each bag extended nearly to the axilla. Smaller bags were placed above these to support the arms and keep the body from feeling its own weight.

The comfort and quiet brought by the removal of the splint and bandages were all that could have been desired. The patient's expression was: "There, now I feel perfectly comfortable." Almost as a matter of course the vomiting that had been present from the beginning soon ceased, and the stomach retained what was swallowed. The case progressed favorably. The bed linen was easily removed. The operations of nature, by the removal of the twelve-inch section of mattress with its sand-bag, were performed with comfort and cleanliness, and with not the slightest movement of the patient. No bandage or extension was necessary; passive motion was made as soon as it was deemed expedient, and on the fiftieth day from the receipt of the injury the patient was removed to a chair.

On January 21, 1878, she had a very easy accouchement, and the child, a boy weighing nine pounds, was apparently none the worse for his mother's injury.

At the present writing, December 5, 1878, Mrs. Faxon is able to walk a couple of miles with a cane, and barring a little pain, evidently not in the hip-joint, goes about her occupations as usual, and even has joined in a dance. Her weight, one hundred and sixty-two pounds, is a little against her very rapid recovery of complete use of the limb, but of the perfect recovery there is no doubt.

The simplicity of this new form of application of an old agent may be of benefit to other sufferers, and is the only reason for reporting the case.

DR. JONAH FRANKLIN DYER.

DEATH has again invaded the ranks of the medical profession of Cape Ann. At half past three o'clock Sunday morning, the 9th inst., died Jonah Franklin Dyer, a highly worthy and much respected physician and citizen of Gloucester.

Dr. Dyer was born in Eastport, Maine, April 15, 1826, and was consequently not quite fifty-three years old at the time of his death. After receiving his preliminary education, he commenced the study of medicine under the tuition of Dr. Trafton, of South Berwick, Maine, and finally graduated from the Medical School, Bowdoin College, Brunswick, Maine, in the year 1849. Soon after receiving his degree, he commenced the practice of medicine in Boston, where he remained two years. Thence he removed to Annisquam, a village in the northern part of Gloucester, in July, 1851, where he continued the practice of medicine successfully till the war of the rebellion broke out; and when the first call for surgeons for the Massachusetts volunteers was issued, he promptly offered his services, was commissioned by Governor Andrew in August, 1861, and appointed to the Nineteenth Regiment as surgeon. His activity and fidelity to trusts committed to him while in the army are matters worthy of record; suffice it to say they gained him the honorable position of division surgeon.

Returning from the war at its close, he settled in the Harbor Village, but, through the intercession of his former friends and patrons, was induced, June, 1871, to move back again to Annisquam, where he continued to practice so long as his failing energies permitted.

Dr. Dyer was a man of public spirit and of decided political preferences, and therefore became somewhat prominent in public life. He was a representative to the state legislature from Gloucester in 1869; was connected with the school board several years; was city physician at one time; was alderman from Ward 6 from the commencement of the city government till his inauguration as mayor of the city in 1878; and also held the office of medical examiner till obliged to resign on account of failing health.

Intermittent fever had so shattered his constitution that after his return from the army exposure frequently incapacitated him for professional work. A chronic and troublesome cough was engendered, and finally, early in the month of June, 1878, an attack of pneumonia ushered in the more active symptoms of phthisis which terminated in his death.

As a professional brother Dr. Dyer was courteous, considerate, and free in the interchange of opinions. As a physician he was well abreast of the times, sympathetic, yet deliberate, decided, and judicious in measures and methods, and therefore a successful practitioner. A truly valuable professional and Christian example has been left by him, and we have occasion sincerely to mourn his loss from our midst.

J. G.

GLOUCESTER, February 11, 1879.

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 8, 1879.

Cities.	Population estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from					
				The Principal "Zymotic" Diseases.	Pneumonia.	Scarlet Fever.	Diphtheria and Croup.	Diarrheal Diseases.	
New York.....	1,085,000	602	28.27	20.25	10.63	11.29	4.49	0.83	
Philadelphia.....	—	353	—	—	—	2.56	2.27	—	
Brooklyn.....	564,000	226	20.89	16.27	13.27	12.65	10.17	0.89	
St. Louis.....	—	113	—	15.04	14.16	0.89	4.42	2.65	
Chicago.....	—	148	—	15.54	12.16	1.35	9.46	—	
Baltimore.....	365,000	134	19.14	19.40	12.69	5.22	7.46	0.75	
Boston.....	356,500	144	21.07	15.28	9.03	3.47	9.03	—	
Cincinnati.....	—	89	—	28.09	8.99	16.85	3.37	1.12	
District of Columbia.....	165,000	84	26.67	9.52	9.52	3.57	1.19	2.33	
Pittsburgh.....	—	54	—	14.81	9.26	3.70	5.66	—	
Milwaukee.....	—	34	—	11.76	17.65	—	5.88	—	
Providence.....	101,000	30	15.49	20.00	13.33	—	16.67	—	
New Haven.....	—	22	—	4.55	31.82	—	4.55	—	
Charleston.....	—	39	—	10.26	7.69	—	5.13	—	
Lowell.....	53,300	14	13.69	14.29	—	—	14.29	—	
Worcester.....	52,500	19	18.87	5.26	15.79	5.26	—	—	
Cambridge.....	51,400	16	16.22	12.50	12.50	—	—	—	
Fall River.....	48,500	—	—	—	—	—	—	—	
Lawrence.....	38,200	14	19.11	28.57	14.29	—	21.43	—	
Lynn.....	34,000	8	12.27	—	12.50	—	—	—	
Springfield.....	31,500	13	21.52	30.77	23.08	23.08	7.69	—	
New Bedford.....	27,000	—	—	—	—	—	—	—	
Salem.....	26,400	6	11.85	16.67	16.67	—	—	—	
Somerville.....	23,350	9	20.10	22.22	—	—	11.11	—	
Chelsea.....	20,800	7	17.55	28.57	—	—	14.29	—	
Taunton.....	20,200	6	15.49	—	16.67	—	—	—	
Holyoke.....	18,200	7	20.06	—	14.29	—	—	—	
Gloucester.....	17,100	8	24.39	—	12.50	—	—	—	
Newton.....	17,100	4	12.20	25.00	25.00	25.00	—	—	
Haverhill.....	15,300	6	14.45	16.67	—	—	16.67	—	
Newburyport.....	13,500	8	30.90	—	25.00	—	—	—	
Fitchburg.....	12,500	6	25.03	33.33	—	—	16.67	—	

Two thousand one hundred and twenty-three deaths were reported: 361 from consumption, 217 from pneumonia, 131 from scarlet fever, 82 from diphtheria, 78 from bronchitis, 40 from croup, 27 from whooping-cough, 26 from typhoid fever, 18 from erysipelas, 13 from diarrhoea and dysentery, nine from cerebro-spinal meningitis, one each from cholera infantum and measles, and none from small-pox. A marked decline in acute pulmonary and in the prevailing zymotic diseases; erysipelas shows an increase, and also pulmonary con-

sumption. Philadelphia reported 63 deaths from acute pulmonary diseases, not included in the above.

From *bronchitis* 41 deaths were reported in New York, 10 in Brooklyn, nine in Chicago, eight in Baltimore, five in St. Louis, three in Pittsburgh, two in Cincinnati, District of Columbia, and New Haven, one in Milwaukee, Providence, and Charleston. From *whooping-cough*, 15 in New York, five in Cincinnati, two in Philadelphia, one in Brooklyn, St. Louis, Baltimore, and District of Columbia. From *typhoid fever*, six in Baltimore, four in New York, three in Chicago, two in Philadelphia, Brooklyn, Pittsburgh, and Charleston, one in St. Louis, District of Columbia, Providence, Lawrence, and Chelsea. From *erysipelas*, six in New York, four in St. Louis, three in Brooklyn and Boston, one in Baltimore and Louisville. From *cerebro-spinal meningitis*, two in Chicago, Milwaukee, and Cambridge, one in New York, Cincinnati, and Fitchburg. The one death from *measles* was in Pittsburgh. Baltimore reported two and Charleston three deaths from *trismus nascentium*. In Nashville, the weather was moist and cold, with much sickness; pneumonia was prevalent. In Washington the death-rate among the blacks was double that of the whites. The returns from seventeen of the nineteen cities in Massachusetts, with a population of 791,850, showed a decrease in the mortality from acute pulmonary diseases, an increase from the prevalent zymotics, — slight from diphtheria. Acute pulmonary diseases were very prevalent in Louisville, New Orleans, and San Francisco; diphtheria in Buffalo and Salt Lake City.

Sergeant Purcell's meteorological record for the week, in Boston, is as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.			Direction of Wind.			Velocity of Wind.			State of Weather.			Rainfall. (Melted Snow.)		
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration in Hours.	Amount in Inches.	
Feb. 2	29.499	22	30	8	67	53	68	61	NW	NW	NW	16	24	19	O	O	C	—	—
" 3	29.628	29	36	20	72	53	57	60	NW	NW	NW	17	16	6	C	C	C	—	—
" 4	29.839	29	34	25	64	52	61	59	NW	NW	W	15	20	11	F	C	C	—	—
" 5	29.796	27	37	20	71	61	88	73	W	W	E	4	4	2	F	O	S	—	—
" 6	29.853	30	35	25	87	61	78	75	NW	NW	NW	5	2	3	F	F	O	10.2	.23
" 7	30.096	26	35	18	85	43	64	64	NW	W	W	8	9	8	C	C	C	—	—
" 8	30.333	24	31	19	75	36	60	58	W	NW	O	12	15	0	C	C	C	—	—

Weekly Summary.	Barometer.	Thermometer.	Humidity, Saturation being 100.	Wind.	Rain.
	Mean 29.855	Mean 26.9	Mean 64.5	Total miles traveled, 1858.	Total amt. .22 in.
	Max. 30.371	Max. 36	Max. 94	Prevailing direction, N. W.	Duration, 10 hrs. 15 min.
	Min. 29.345	Min. 8	Min. 36		
	Range 1.026	Range 28	Range 58		

Barometer corrected for temperature, elevation, and instrumental error.

Explanation of weather symbols: O, cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., snow; L. S., light snow; T., threatening.

Station: Latitude 42° 21'; longitude 71° 4'; height of instrument above the sea, 77.5.

The death-rate for the week ending January 25th for the twenty large English towns, with a population of 7,269,976, was 26.3, or still decreasing: for London 26.1, Bristol, 20.9, Birmingham 23.8, Liverpool 31.4, Manchester 33.6; in Glasgow it was 29, in Dublin 43. Pulmonary diseases, scarlet fever, and whooping cough were most prevalent; only 13 deaths were reported from diphtheria. Small-pox was still fatal in Dublin and London, with an increased fatality in the latter. Fevers are still prevalent in India, cholera less so. Small-pox is still prevalent in Paris, Vienna, and Budapesth, and especially so in St. Petersburg. Typhoid fever prevailed in Paris, and with typhus was very fatal in St. Petersburg; diphtheria in Paris, Berlin, Dresden, Munich, and Vienna.

Surgeon-General Woodworth reports increased destitution and mortality in Brazil, a single case of yellow fever quarantined at Key West, and that the various European gov-

ernments, including England, are taking precautions against "the plague," which he advises for this country. The great mortality in some small villages of Astrakhan is said to be due largely to destitution and bad sanitary arrangements; the evidence is not clear as to the extent of "the plague," nor as to the probability of its spreading widely.

SUFFOLK DISTRICT MEDICAL SOCIETY. — A regular meeting will be held at the hall, 19 Boylston Place, on Saturday evening, February 22d, at seven and a half o'clock. The following papers will be read:—

Miss Louise S. Baker. A Subject connected with Medical Practice.

Dr. F. H. Davenport. A Case of Thrombosis following Operation for Laceration of the Cervix.

Dr. Calvin Ellis. Two Cases of Dilated Bronchi.

Supper at nine o'clock.

BOOKS AND PAMPHLETS RECEIVED. — The Germ Theories of Infectious Diseases. By John Drysdale, M. D. London: Baillière, Tindall, and Cox.

Diphtheria: Its Causes, Prevention, and Treatment. By J. H. Kellogg, M. D. Published by the Good Health Publishing Company, Battle Creek, Michigan.

Twelfth Annual Report of the Massachusetts College of Pharmacy. 1878-79.

Malposition of the Ureters. By W. H. Baker, M. D. (Reprint.) New York. 1878.

De l'Accouchement artificiel par les Voies naturelles substitué à l'Operation Césarienne post Mortem. Par le Docteur A. Thévenot. Paris. 1878.

The First Annual Report of the Presbyterian Eye and Ear Charity Hospital, Baltimore, Md. 1879.

Fourth Report of the Salem Hospital. 1879.

Twenty-Sixth Annual Report of the Pennsylvania School for Feeble Minded Children. West Chester, Pa. 1878.

Proceedings of the New Hampshire Pharmaceutical Association at the Fifth Annual Meeting. With Reports on the Progress of Pharmacy and the Address of Professor W. P. Bolles, of the Massachusetts College of Pharmacy, Roll of Members, and Pharmacy Law. Concord, N. H. 1879.

Thirteenth Report of the Trustees of the Connecticut State Hospital for the Insane. 1879.

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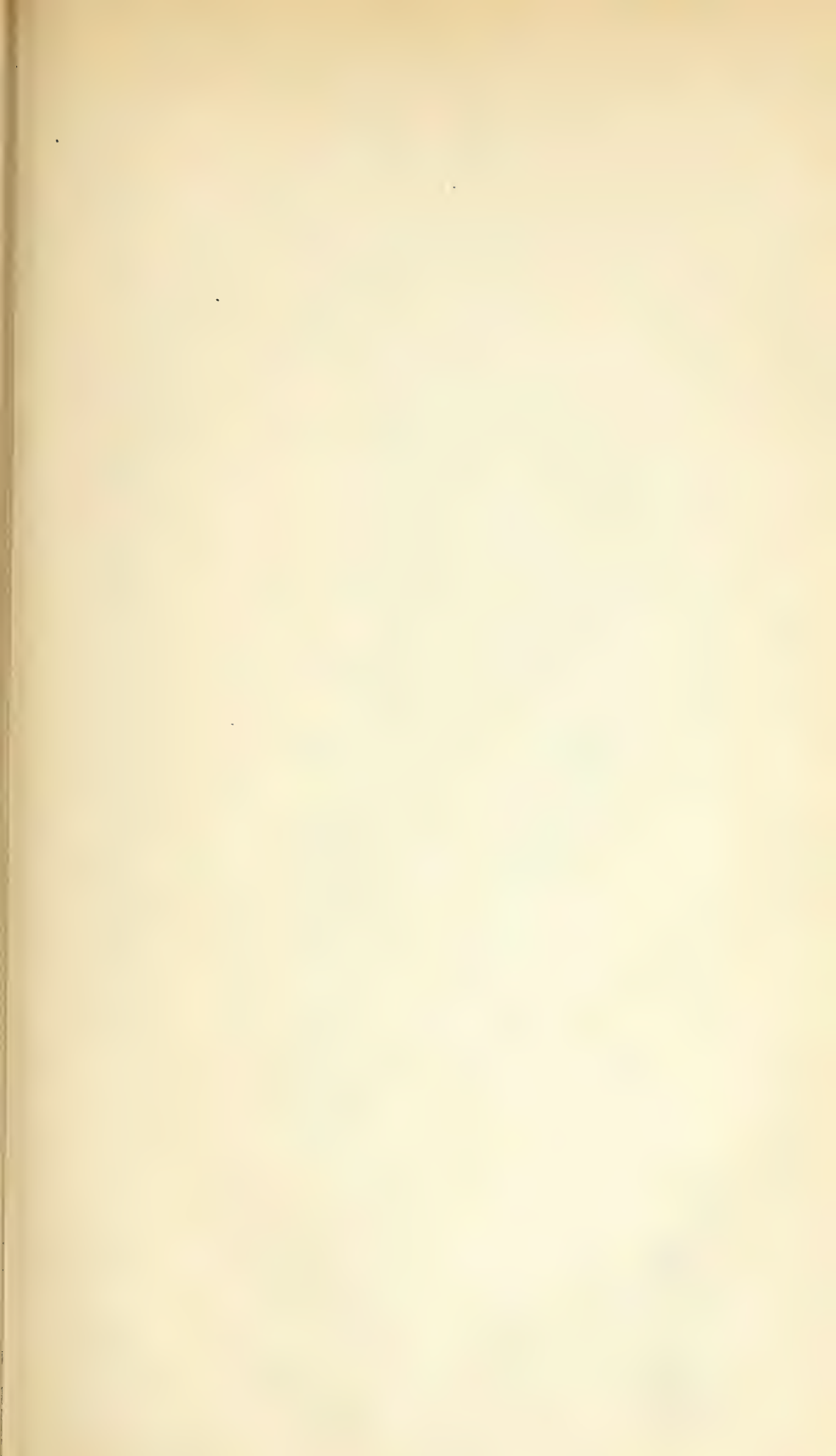
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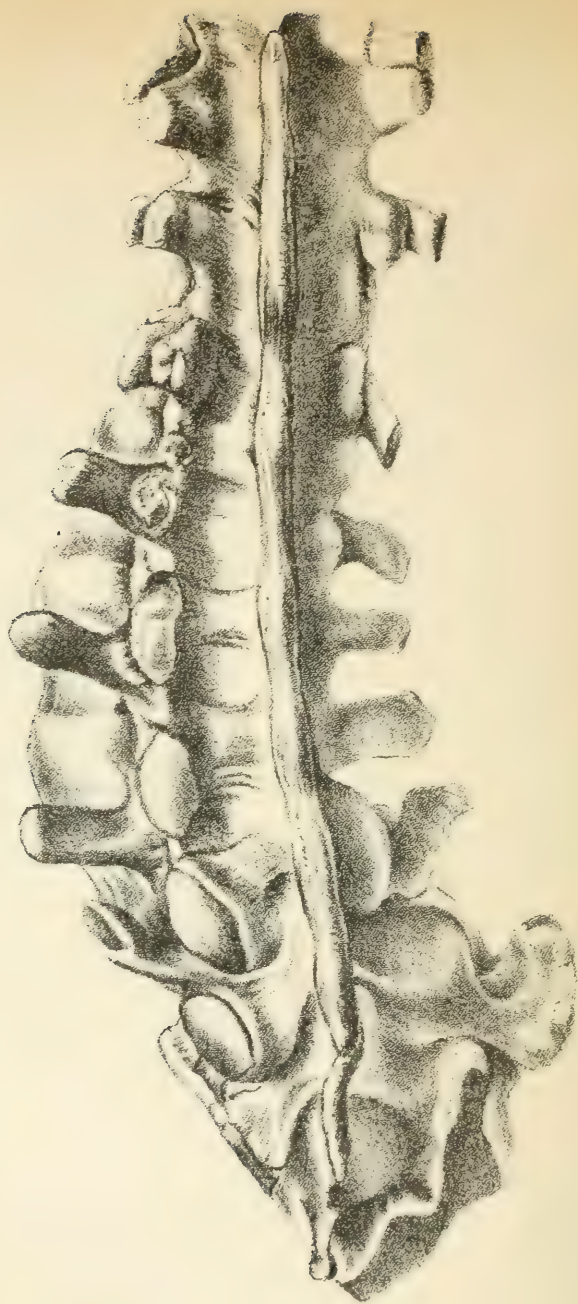


PLATE 1.

DRAWING OF THE SPECIMEN FROM WHICH THE CAST REFERRED TO IN THE TEXT WAS TAKEN, EXEMPLIFYING THE NEARLY STRAIGHT LINE OF THE SPINOUS PROCESES WITH VERTICAL ROTATION OF THE VERTEBRÆ IN LATERAL CURVATURE OF THE SPINE. POSTERIOR VIEW.

(From Adams)

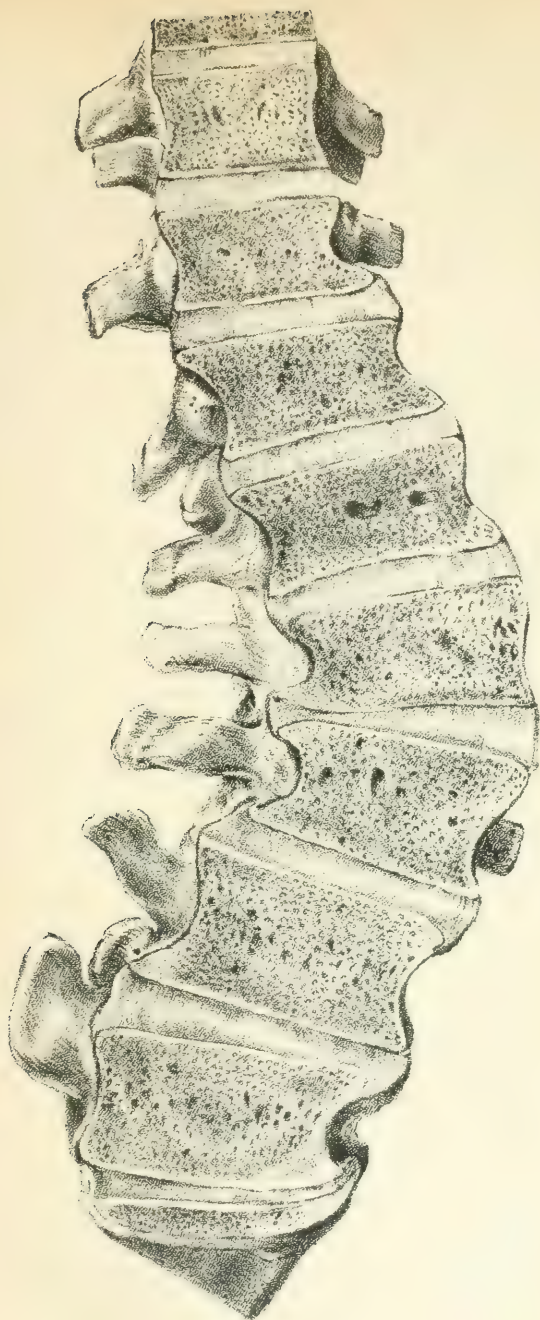


PLATE 2.

DRAWING OF THE SAME SPECIMEN FROM WHICH PLATE 1 WAS TAKEN. ANTERIOR VIEW. APPEARANCE AFTER SECTION OF VERTEBRÆ AND CARTILAGES.

(From Adams.)

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

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LECTURES.

LECTURE ON THE INFLUENCE WHICH THE PREVAILING METHODS OF EDUCATION HAVE ON THE PRODUCTION OF DEFORMITY IN YOUNG PERSONS OF BOTH SEXES.¹

BY BUCKMINSTER BROWN, M. D.

I HAVE been requested to make some remarks, this evening, on the influence which the prevailing methods of education have on the production of deformity in young persons of both sexes.

What I have to say will be almost exclusively confined to the effect of position in causing scoliosis, or "Rotato-lateral curvature of the Spine,"² an affection which, as is well known, prevails to a great extent in the community. Lateral curvature is more commonly met with in girls than in boys. The dress-maker is far more cognizant of the extent to which it prevails than any one else, not excepting the physician.

To bad positions in writing, drawing, at the piano, etc., also while standing during recitations; to carrying weights, heavy books, for example, more on one arm than the other, to too much exercise of one arm, while the other is comparatively idle, can undoubtedly be traced the majority of these curvatures. But it is not malposition alone that causes the trouble. It is likewise due to long continuance in one position, which at first may be a good one, but which if continued for a considerable length of time becomes changed, from simple fatigue of a certain set of muscles, into a bad one. These relax; sometimes one muscle or set of muscles gives way; sometimes another set. The burden of support is consequently thrown, to a great extent, upon the ligaments which bind the vertebræ together. These in a young person are soft; their elasticity is soon overcome, and they are stretched. The chain of bones of which the spine is composed yields. The muscles and ligaments no longer do their work, and the superincumbent weight of the head and shoulders bends the chain, or perhaps the preponderance of other muscles, not so easily fatigued, disturbs the equilibrium,

¹ Delivered before the American Social Science Association, Department of Health.

² On Spinal Weakness and Spinal Curvature. By W. J. Little, London, 1868.

and a curve is the result. This curve may commence in the dorsal region, between the shoulders, or it may begin in the loins.

At first the bend is easily straightened. Afterwards the intervertebral substances, which may be spoken of as cushions between the vertebræ, become depressed on the side toward which the spine has curved, and this depression finally becomes permanent. The pressure being continued, the bone itself becomes implicated, and the sides of the bodies of the vertebræ become narrowed, wedge-shaped, and likewise the articulating processes are shortened.

Worse than this, partly from the effect of position, partly from peculiarities connected with the supports by which the vertebræ are united, a very curious change occurs in the relation of one bone to the other. A vertical flexion takes place, a cork-screw-like or spiral twist, which is probably synchronous with, or precedes the lateral curve, — a twist so decided that the proper anterior surfaces of the vertebræ are turned partly round upon their own axes, and look toward the convexity, and the spinous processes toward the concavity of the curve.

This, as primarily the effect of position, may be exemplified by the attitude generally taken while writing, drawing, etc.

For example, in drawing, the right arm and shoulder are usually put forward; the hips remain square, or perhaps a little turned in the other direction. The right shoulder is elevated, the right shoulder blade projects, the head generally inclines towards the right side, and the upper portion of the trunk bends forward. Thus one part of the body fronts in a different direction from the other. I describe only one of the malpositions which are commonly assumed.

In this way a rotation of one or more of the small bones upon another takes place. This rotation is very insidious. As a rule it always accompanies scoliosis properly so called.

There is a simple lateral or serpentine curve of the spine which not infrequently takes place as a sequel to pleurisy, pneumonia, or other intracostal disease. In these and other rare cases arising from incidental causes there is, generally, no rotation of the spine upon its axis. They are so different in their origin and in their manifestations from the class with which we are now concerned, that they possess no especial interest for us at the present time.

The spiral twist may make great progress, and not show any signs by which a common observer will suspect that it exists, and often it will escape the notice of those much more accustomed to such things. It will be understood how easily a person may be thus deceived by looking at this plaster cast of a curved spine, which I procured in London some years since. (See Plate I.)

It is very interesting in many points of view. Looking at it from behind, we see that the projecting ridge of bone, the spinous processes,

is nearly straight. It is by this line that most persons judge whether the spine is straight or otherwise. In tracing it down it seems almost a straight line. (See Plate I.) If the model is turned round there is a great change in the appearance of the curve, showing how much more extensive the internal or anterior curve is than the external. (See Plate II.) Again, — I set it on the desk, — you notice that the spiral twist begins at the upper part, just where you would naturally expect that it would occur in the position usually assumed for drawing, etc. Then there comes the curve of compensation in the loins, and the corkscrew twists in the other direction.

This model demonstrates how straight a spine may appear, yet be in reality the subject of an extraordinary curvature. In the cast the rotation movement extends to a quarter of a circle in the centre of the curve. The alterations in the neighboring parts are, in a case as advanced as this, sufficient to indicate that great changes are taking place in the relations of the internal organs. These photographs, which I will pass round, will give an idea of these alterations in some cases. The cast also explains why it is that the shoulder blade on one side projects, and on the other sinks in. It shows that the ribs are thrown out on one side of the column by this vertical twist in the spinal bones to which they are attached, forcing backwards the shoulder blade as they bulge out. It makes plain why there is an appearance of swelling in the loins on the opposite side. This swelling may be noticed in the photographs. It frequently resembles a tumor or an abscess, and has sometimes been mistaken for one or the other. This prominence is due to the rotation of the transverse processes on that side. These points of bone which should be buried beneath the mass of muscles that lie on each side of the column push backward the muscles, and thus a factitious tumor presents itself.

This plaster mold explains also the projection of the hip, which, unfortunately, is often the first evidence that something is wrong which attracts the attention of the mother, when the curve is what is called a lumbar curve, that is, when it begins in the loins. In cases where it commences between the shoulders it is the displacement of the scapulæ which is first noticed. You will see that before either projection can take place, the curvature must have made considerable progress.

The changes in front are equally striking: the prominence of the ribs on the side the reverse to the one on the back; also the peculiar manner in which the arm appears to be attached to the shoulder, in consequence of the displacement of the shoulder blade.

These are some of the characteristic features of one class of spinal curvature which are exemplified by the specimens before us. The case from which the cast was taken was an unusual one, but some of the photographs present others nearly as severe.

What are the practical lessons which we may learn from what has been said? The great point is that the child or student should, while at school or at his studies, have frequent change of position, — that no one posture be kept up for any considerable length of time. This I consider of the first importance. The boy or girl who lives out-of-doors, playing, romping, climbing, etc., never has lateral curvature.

The reason that constant change of position is so important has been previously stated. The muscles of the back have much to do. Let their work be frequently varied. If they are unusually thin and undeveloped, let them have, from time to time, complete rest, either well supported in a comfortable chair, or in the horizontal position.

The spinal muscles — I repeat it — must not be allowed to become weary by long continuance in one position, especially if that position is not one in which the back is well sustained by properly adjusted support. The position in standing must be carefully watched. A most pernicious habit, and one which is very often to be noticed in school-girls (I think I have observed it in girls more frequently than in boys), is that while we are talking to them, or during recitations, especially if they are much interested in what is going on, they are standing upon one leg. This position is assumed involuntarily, and it is always, or almost always, one and the same leg upon which the weight is thrown. The effect of this is easily understood: one side of the pelvis is lifted up, curving the spine in the loins; the opposite leg is advanced in front of the other, twisting the pelvis and rotating the vertebræ. Of course the curve of compensation takes place between the shoulders. One is depressed, the shoulder blade gradually projecting, and with the change, and in fact assisting to produce it, again occurs the spiral twist.

The youth passes many hours at school. It is of great importance that the seats should be so constructed as to give support to the back. Equally or more important is it that the desk should be of proper height, and should not be at such a distance from the seat as to cause the pupil to stoop when writing or reading. It should be so arranged that it can be drawn towards the student when seated, thus enabling him or her to sit upright, with the back against the back of the seat while using the pen or pencil, or while studying.

At the piano the chief difficulty is again the same, — the long-continued effort to keep the back erect. Some muscles inevitably give way. In embroidery, in drawing, the same thing occurs, combined also with error in position. I have visited rooms in which drawing was taught, where all, — male and female, — with scarcely an exception, were sitting in a position not only to curve but to twist or rotate the spine, and in most the posture was such as to produce a triple curve. Horseback riding is a healthy exercise, but the seat of a girl upon the horse is not a natural one. Perhaps it can be so arranged as to have the pelvis

square with the horse, or directly across. I have been convinced that some of the worst and most indomitable twists in the loins with which I have had to deal, spiral twists I mean, have arisen from being too much in the saddle. In many instances there probably is constitutional debility, and perhaps hereditary tendencies, rendering certain individuals more liable to this complaint than others. But in persons who appear otherwise perfectly strong, healthy, even robust, I have seen severe rotary curves which could be distinctly traced to the operation of some one or more of the causes I have mentioned.

The theories which have been proposed to explain the cause or causes of lateral curvature are numerous. It may be well to refer briefly to some of the most prominent. Debility of the muscles which are attached to and which support the spine is one, and is perhaps the most generally received. Unquestionably, weakness and relaxation of muscles and ligaments are important elements in the formation of spinal curvature. Muscular contraction,¹ paralysis, hereditary tendency, the greater use of the right arm than the left, the unequal distribution of the internal organs, malformation or irregular growth of the vertebræ or of the ribs inserted into them, have each been adduced by writers on this subject as originating the complaint we are considering.

Various hypotheses have likewise been advanced to account for the vertical rotation to which I have referred.

One writer² has brought forward a complicated theory that would take pages to explain, in which he attributes the trouble chiefly or solely to the action of the serratus magnus muscle. He considers that the natural thoracic respiration of women, aided by the fact that one lung is larger than the other, and one arm is heavier than the other, is the real and efficient cause of the deformity. He maintains that the influence of these causes is greatly increased by tight lacing and by clothing compressing the abdomen. This author cites as a "crucial proof" of the correctness of his theory that among Arabs, Hindoos, and others who use a loose form of dress such deformity is all but unknown. The originator of this theory, confirmed by this remarkable crucial test, can hardly have taken into consideration the fact that Arab and Hindoo women not only do not lace tightly and clothe unnaturally, but also do not write much, or draw, paint, embroider, ride sideways on a horse, or occupy themselves in the innumerable arts, amusements, or employments to which the cultivated European or American is so much devoted, and in which, as usually practiced, the position is so unnatural. Likewise, this theory does not explain cases which from time to time present themselves in young girls who have never worn tight dresses, but who have

¹ Guérin.

² *The Causes and Treatment of Lateral Curvature of the Spine.* By Richard Barwell. 1868.

lateral curvature with severe lumbar rotary twist. This has been traced, even in children, to sitting through many hours of forced erectness at school; to sitting at needle-work, or, in one instance, to carrying weights mostly on one arm and with the elbow supported upon the ilium, thus causing rotation in the loins; or under rare circumstances to riding much on horseback. At the present time I have two such cases under treatment, occurring in children between six and nine years of age.

Another explanation of rotary action of the vertebræ has been founded upon the physiological lateral or circular movement possessed by the anterior portion of the spinal column, the posterior being more firmly held by ligaments and muscles. Connected with this explanation is the theory that vertical pressure is the direct cause of lateral curvature, and with it necessarily of rotation.¹

The abnormally constrained attitudes which are assumed in many of the employments and amusements of civilized life, and which are involuntarily assumed when the spinal muscles are overfatigued, favor and increase the physiological action to which reference is here made.

The true ætiology of spinal deviations, lateral and rotary, can be found only in the peculiar yet very common faults of position which I have previously described. The alterations which take place in the form of the bones, by which the rotation is increased and rendered permanent, were well described by Mr. Alexander Shaw many years since. His portrayal of these changes can be best given in his own words:—

“If we attend to the natural structure of the spine, it will be seen that whilst we lean the body to one side, the pressure is thrown almost exclusively upon the articulating processes of that side; these processes, delicate as they are, being the only bony structures which check the lateral movements of the trunk. Hence, when a habit is acquired of inclining to one side, or of resting upon one hip, as in sitting, the sharp edges of these small joints of bone receive the weight of the entire body. But as the articulating processes are remarkably soft, and imperfectly formed at the age of puberty, it follows that they will become wasted by absorption when this position is long persisted in, and an inequality of the length of these two lateral props on which the vertebræ rest posteriorly will be the consequence, those of the concave side being shorter than those of the convex. Fifth, in lateral curvature of the spine we have a distinct demonstration that the articulating processes give way more extensively than any other parts of the column. This is evinced by the rotation which the spine makes in its perpendicular axis at the same time that it inclines laterally. The joints of the articulating processes being situated posteriorly, as well as laterally, the spinal column cannot yield in their direction without wheeling partially round;

¹ The Cause of Rotation in Lateral Curvature of the Spine. By A. B. Judson, A. M., M. D.

and it is owing to this rotation that the transverse processes and the ribs are directed obliquely forward upon the concave side, and obliquely backwards upon the convex side of the curvature, thus giving rise to a fullness or swelling on the one hand, and a depression or sinking inwards on the other.”¹

Mr. Shaw accurately depicts the pathological changes in scoliosis, but his theory of the primary cause of rotation is not satisfactory. If the spinal column could not yield laterally without at the same time “wheeling partially round,” then the side curves, which are the occasional result of intracostal affections and of rachitis or spondylitis, would always be attended by this phenomenon. The fact that simple curvature or curvatures without torsion do occur we have previously noticed.

I must briefly refer to another side of this question, in regard to the effects of the present methods of education,—overaction of the brain. Too much mental stimulus has an undoubted effect as one of the predisposing causes of spinal curvature. Mental rest combined with other appropriate conditions will sometimes cure the trouble when in its incipient stage. That this physical result, this effect on the muscular and ligamentous system, should arise from overaction of the mind may appear to some a strange phenomenon. If we consider a few moments it will be a matter of no surprise. Scoliosis occurs most frequently at an age when the vital powers, the nerve force, so to speak, is concentrated to a great extent in the important work of bringing about that change in the system which is to result in maturity. In addition to this it has to keep in active working order all the usual complicated arrangements by which this wonderful machine, the human body, is enabled to perform its accustomed tasks. We must be careful not to call too much upon this vital power, this nerve force, not to divert it too much in other directions, not to concentrate it too much upon head work. If we do we shall most assuredly have cause for regret. In common with the rest of the organization, the intricate apparatus by which the spinal column is held in position will suffer, and all the more speedily will it become deranged from the fact that while the remainder of the organism is comparatively in repose, the spinal muscles are making a constant effort to retain the trunk erect.

It is impossible for me at this time to examine all the causes from which lateral curvatures may arise in our common methods of education. Our attention has been chiefly confined to those connected immediately with schools. I have not commented upon the debility of the system which originates in illy ventilated rooms, or, what is quite as bad or worse, draughts of cold air, etc. These do their part. Upon such matters others will speak to you more fully than I can do.

¹ Medico-Chirurgical Transactions, vol. xvii., London, 1832, quoted in Lectures on Curvature of the Spine. Adams, London, 1865. Pages 126, 127.

Gymnastic exercises, — calisthenics, military drills, — boat rowing, etc., are all serviceable in preserving health and symmetry, if used with moderation, and with special reference to the peculiarities of the individual. On the other hand, I have seen severe injury, and even disease of the spinal nerve or membranes, which has originated in their immoderate employment, or where due consideration has not been given to the pupil's idiosyncrasies.

There are other branches of this subject which should receive our attention. I had but a brief notice of preparation for this evening, and I have had only time to refer to some of the more prominent points of a theme which deserves serious consideration.

A CASE OF HYDROPHOBIA.¹

BY CHARLES EDWARD BANKS, M. D., PORTLAND.

ON the 14th of February, 1878, George McF., night watchman at the Portland Rolling Mills, was bitten in the fleshy part of his thumb by a dog. The circumstances are as follows: Mr. McF., feeling somewhat lonely in his long night patrols, and thinking that he would be better protected from danger, purchased a large watch-dog, which was said to be a cross between a coach-dog and a bull-dog. The animal was fully developed, being about two years of age, and although he was much attached to his master, apparently, yet he was very cross to strangers. It is understood that this was the reason his former owner disposed of him. The dog became suddenly ill, and hid himself away in the stable a few days before the accident, and Mr. McF. entered the building in search of him. When he had discovered his hiding-place, he began to pet him as usual, but the dog raised his head and deliberately bit the right thumb of his master severely. Mr. McF. then drove him out of the stable, and he was not seen in that vicinity for three or four days; at the expiration of which time, a son of the deceased found him again in the stable one morning, having entered during the previous day unknown to them. He was then ugly and sullen, and the gentleman drew his revolver in readiness to protect himself from any further manifestations of his anger. It was a fortunate precaution, as the animal made a spring at him while he was harnessing his horse, but a well-directed bullet finished him. Subsequent investigation revealed a place where the dog had gnawed at the stable door during the night to get free. At the time of the injury, Mr. McF. was fifty-five years of age, and, until within two years, had been in the habit of using intoxicating liquors, though his inclinations assumed the form of occasional spree. Since his reformation the family of the deceased

¹ Read before the Cumberland County (Me.) Medical Society.

have thought that his health had not been as good as before, but the change, if any, may have been due to the sudden relaxation of the artificial stimulants. Otherwise there was nothing wanting, either physically or mentally, to make up the full measure of his general bodily health. The wound in the thumb healed very readily without treatment of any kind, and up to the day of his death only a small cicatrix was left to remind him of the unlucky bite. The fact that he had been bitten by a sick dog, however, kept clinging to him, despite his efforts to forget it, and his frequent mention of the affair and his anxiety as to the result showed that fear was indelibly impressed on his mind. About the 10th of May following, one week before his decease, Mr. McF. felt a little unwell, though there were no positive symptoms of any particular trouble. His wife noticed that he brought back about all of the lunch she had prepared for his night-watches, but he continued at his work, and the family never once thought that his indisposition was caused by the bite. On Sunday night, May 12th, he experienced difficulty in swallowing a cup of tea, but made no mention of it, and from that time till Tuesday he ate but little food. Indeed, such was his aversion to it that the aroma of the cooking in an adjoining room was so offensive to him on Monday that all culinary operations had to be suspended. Soon he noticed a peculiar nervous sensation in his right arm, which resembled a spasmodic neuralgic pain, and extended from the thumb to the shoulder. On Tuesday night he went to his watching post as usual, and notwithstanding his fast he felt comparatively well when he left home. As the morning dawned, however, he began to grow worse, having chills, pain in the stomach, and extreme nausea, and laid down before the furnace to warm himself. Obtaining no relief from this, he determined to remain till the workmen came, when he returned home, and vomited a small amount of mucus.

On the morning of Wednesday the family physician, Dr. H. N. Small, of Portland, was summoned, and his first impression of the case was that the man had become chilled, and, knowing his previous habits of dissipation, supposed it had affected him rather more than usual. Morphia powders were left, and one eighth gr. was ordered to be given every two hours. At that time he was extremely nervous, feeling as if something were choking him. The doctor strongly suspected delirium tremens, but was informed by the family that he had not drank any liquor, to their knowledge, for two years. His strange look, however, led the doctor to anticipate some new developments, and he left minute directions of procedure, and orders to summon him if any fresh complications ensued. Early in the afternoon he was again called, and the messenger reported that on taking a piece of ice into his mouth to relieve thirst he ejected it suddenly, and with so much force that it went

across the room. On arrival the doctor learned from diligent inquiry that he had been bitten, and the patient, eying him keenly as he acknowledged it, asked if it was the cause of his present sickness. For the sake of the mental effect the doctor gave him an equivocal reply, and injected one fourth gr. morphia, being now fully convinced of the character of the disease. Early on Thursday morning he was again summoned, and, in company with Dr. F. H. Gerrish, visited the patient, finding him excited, nervous, and quite weak from long fasting, loss of sleep, and spasms, which were reported as having occurred during the night previous.

To make the diagnosis certain, the doctors tried the various tests, such as the mention, the sound, and the sight of water, to all of which he responded with fearful accuracy. Full doses of jaborandi were ordered, and, after another large injection of morphia, he was left to a trial of the new drug. Early in the afternoon word was brought that the medicine could not be obtained in the city, and thus it will be noted that, to within twelve hours of his death, he had not had any specific treatment. The doctor invited Dr. Thayer to visit the patient with him, and while they were there, in the afternoon, he had a terrible spasm, which eclipsed all former ones in length and distressing character of the struggles. During all this time his mind had been unimpaired, and his conversation on every topic was calm and sensible. He was very enthusiastic in recounting his experience in the late war, and produced his journal and official documents of enlistment, promotion, and discharge with evident satisfaction. He had arisen from the bed to get some one of these papers when he felt the spasm approaching, and after warning his attendants to disperse, lest he should injure them, he went into the terrible struggling peculiar to this malady. His mouth was filled with a ropy, sticky saliva, which he would attempt to expectorate, but failing in this would claw it out with his hands. If there had been any doubt in their minds before as to the nature of the disease, this last exhibition of the latent power of his nerve force made it perfectly clear. Feeling that these hours were to be his last, and with a knowledge of the rarity of such cases in our midst, the attending physician invited Drs. Dana, Gordon, and Weeks to be present, and they all united in confirmation of the diagnosis. A consultation was then held as to the best method of palliative treatment in view of the inability to obtain jaborandi. The deliberation resulted in recommending hourly injections of one half gr. physostigma venenosum, or calabar bean, alternating with rectal injection of one oz. whisky and one scruple of chloral. The writer was then summoned to remain in attendance during the night to fulfill the directions as set forth by the council. On arrival, at ten o'clock, Mr. McF. was sitting up in the bed, which by this time was in a very dilapidated condition.

His respiration was then spasmodic, as in fact were all his movements, and his attempts to converse were at times checked by labored expectoration, or by slight spasms. The popular idea that hydrophobic patients in their sufferings bark and bite like dogs was not supported in fact or fancy in this case. By stretching a vivid imagination his spasmodic inspirations might be likened to the snapping of a dog, but otherwise nothing indicated it. He wished for all the fresh air we could allow, and insisted on having the outside doors opened. At 10.30 P. M. I informed him of my desire to make an injection by the rectum, and the attendants, misapprehending my intention, brought an empty tin dish. This induced a fresh spasm, and it was some time before I could calm him down enough to proceed. According to his desire he was smothered in the bed-clothes and held by two strong men, while I inserted the nozzle of a Davidson syringe, carefully guarded by cloths to prevent regurgitation of liquid on his buttocks. The injection consisted of one oz. of whiskey and one scruple of chloral hydrate. At 10.50 P. M. he arose from the bed, and expressed a desire to urinate, and the attendants held the vessel while he voided his water. At this time, notwithstanding the vessel contained urine previously passed, in full view, and though he heard the sound of his own water running into the vessel, there was not the least exhibition of excitement. This seems to me to be a curious and perhaps important point, and may serve some future investigator in determining the pathology of this disease, whether it is purely of a reflex nature, brought on by the action of specific animal virus, or whether it is a condition induced by mental epiphenomena of the voluntary or imaginative cerebral centres. We have seen that the sight of a tin dish induced a spasm, from the supposition that it contained water, and yet the actual sight and sound of it from a natural source produced no discomfort whatever. Possibly, as he could not associate the thought of drinking with the urine, the sight of that kind of fluid did not excite the peculiar spasms.

11.20 P. M. He arose from the bed and started for the water-closet out-of-doors to have a passage from the bowels, and seemed quite provoked that I refused to let him proceed farther. This movement was quite free, and defecation was accomplished without difficulty.

11.45 A. M. I injected one half gr. phys. ven. into the calf of the leg; it was accomplished with ease. Soon, however, he became excitable, thrashing his hands and feet spasmodically, pulling clothes off, and talking incoherently. Several severe spasms occurred then, and the rest of the bedstead was destroyed. In one of these struggles a powerful man, weighing about two hundred pounds, in trying to hold him was thrown back with terrific force against the wall, without any apparent effort. The patient was always aware of the approach of the spasms, and requested the attendants to prepare for them by seizing him. He

told us that he could not help behaving so, and assured us that he would not hurt any one by biting or scratching. Undoubtedly he realized then the character of his illness, and knew the possibility of communicating it.

12.30 A. M. Injection, per rectum, of one oz. whisky, one scruple chloral, and one gr. morphia. He soon became quiet, and from that time till 1.50 A. M. slept well. When he awoke he was as rational as ever, and said that he had no feeling in the calf of his leg. I then gave him a hypodermic injection of one half gr. physostigmin in one dr. whisky. He then called his sons, and had a private conversation about business affairs. At 2.45 A. M. pulse 100, and patient quiet; evidently very weak and failing. Three A. M. Injected one oz. whisky, one scruple chloral hydrate, and one gr. morphia, after which there were no more attempts to use medicine. Patient soon became restless, moaning, and made many efforts to vomit and expectorate. He muttered considerably, and said, "I am roaming in my mind." This was the first indication of loss of mental activity. He called for a paper and his eye-glasses, and attempted to read, but said that "something was wrong, and things were upside down." Four A. M. He was unconscious, and there was no pulse at the wrist, extremities cold, respiration slow, stertorous, and sometimes lost. 4.15 A. M. He was suddenly seized with a frightful titanic spasm. He rose up in the bed, fell back with opisthotonos, and remained stiff in that position till his death, which occurred in about five minutes, when the tension was relaxed.

It seems to me that an important line of argument may be deduced from this case, which has reference to its production. What is the relation of animal contact to the disease known as hydrophobia? Does the character of the bite, being generally a punctured wound, acting in some occult way on the cutaneous nerves, engender general lesion of the entire neurotic system? Is not the similarity between tetanus and this disease attributable to the action on the eccentric nerves primarily? Or, with the fact in view that the peculiar phenomena of hydrophobia are produced only by the bites of certain animals who do not have cutaneous perspiration, shall we assign it to a vitiated saliva? In this case there seems to have been an important factor silently at work, for the patient told me only a few hours before he died that he had been dreading this for weeks past. Who shall say what influence this great shadow of death provoked in his bodily condition, and how much the constant consideration of a dreaded result excited the attack? It seems very probable that, in his lonely night walks, brooding over the circumstances of the accident, and counting the chances of his life, there might have followed a mental condition perfected to excite the hydrophobic spasms.

RECENT PROGRESS IN MEDICAL CHEMISTRY.

BY WILLIAM B. HILLS, M. D.

URINARY CHEMISTRY.

Albuminuria.—Dr. W. Moxon¹ describes a form of albuminuria before unrecorded, to which he gives the name *albuminuria of adolescents*. The persons in whom the albumen is found are young men (he has had no opportunity of examining the urine of girls) between the ages of sixteen and twenty-two. Albumen is not present at all times, but is never absent for any length of time, and is usually found in the urine passed after breakfast. There is, in these cases, no indication of present or previous disease. The albuminuria continues over a period varying from a few months to three years, and usually ends in complete recovery. Dr. Moxon has never met with this condition of things at other periods of life, and has so often seen it in young men that he considers it a disordered state peculiar to this time of life. He refrains, for the present, from any extended theoretical discussion of these cases; but as he has usually noticed, in addition to the albumen, a large quantity of calcic oxalate in the urine, he thinks it possible that morbid material in the urine may induce an active irritation of the kidney.

Dr. Clement Dukes² gives notes of several cases of this form of albuminuria. He has sometimes found the albumen in considerable amount, though generally there is only a trace. In some cases the albuminuria lasted a few days only, disappearing without treatment, returning, however, with every chill or error in diet for some months. In others it was more persistent, disappearing only on a milk diet, or when the patient was placed in bed, reappearing, however, if the patient got up and ate a full meal. Sometimes, when the patient got up, and confined himself to a milk diet, the albuminuria was not observed. When kept warm in bed he could eat a full meal without producing the faintest trace of albumen. Dr. Dukes suggests that the hypertrophy of the heart at puberty and the increased arterial tension, causing hyperæmia of the kidney, may explain the occurrence of the albuminuria. He considers the albuminuria occurring at puberty to be the result of some exciting cause, such as an error in diet, which increases the natural hyperæmia of the organ beyond what it can stand. When the patient is kept warm in bed, and the skin is thus made to assist the kidney, the albumen disappears, as a rule, whatever the diet, the work of the kidney being diminished and the arterial tension lessened. If the patient is up, the arterial tension is still further increased

¹ Guy's Hospital Reports, 1878, page 233.

² The British Medical Journal, November 30, 1878, page 794.

by taking food; the blood serum transudes, and albumen is found in the urine. If milk only is taken the natural hyperæmia of the kidney and the amount of urinary solids are so little augmented that there is no albumen.

T. Morley Rooke¹ and John Ferguson² have noticed similar cases. They have found that the urine passed first upon rising is, as a rule, free from albumen, while that passed during the day contains varying quantities. Dr. Rooke's patients were young girls between the ages of fourteen and sixteen. He noticed, as did Dr. Dukes, that if the patients were put to bed, or kept in a recumbent position, the albumen disappeared altogether, reappearing, however, when they left their beds.

Professor Leube³ has tested the urine of a large number of persons who, upon careful examination, showed no indications of any local or general disease, in order to determine whether albumen can be detected in the urine of persons otherwise perfectly healthy. He examined the morning urine (that first passed upon rising) of one hundred and nineteen soldiers, and detected albumen in the urine of five. The midday urine of these five persons also contained albumen, and in three of the five the amount was larger than in the morning. He also found albumen in the midday urine of fourteen of the one hundred and nineteen whose morning urine was free from albumen. The urine in these fourteen cases was passed directly after hard labor, in the shape of marches or drills of several hours' duration, during which time the soldiers were without food or drink. No casts or blood corpuscles were found in any of the cases, and the albumen disappeared with rest. In one case the urine was free from albumen for two successive days, but upon the third day, after a battalion exercise of four hours, contained a distinct trace of albumen, which disappeared in a short time and was absent the following day. Leube determined the amount of albumen in two cases: in one it was 0.068 per cent., in the other 0.037 per cent. He concludes that in a majority of cases the urine of healthy persons is free from albumen, but that in rare cases, in a completely normal condition of the body, there is a slight yet distinct albuminuria, which is comparatively frequent if bodily exertion precedes the secretion of the urine.

Dr. Fürster⁴ has examined the urine of drunkards with reference to the presence of albumen. He did not find it constant in simple or chronic drunkards, but it occurred in forty per cent. of his cases of delirium tremens, and the amount of albumen was directly proportional

¹ The British Medical Journal, October 19, 1878, page 596.

² The British Medical Journal, October 26, 1878, page 627.

³ Virchow's Archiv, 1878, lxxii., page 145.

⁴ The Practitioner, December, 1878, page 450.

to the intensity of the delirium, and varied with it. In drunkards suffering from nephritis, the amount of albumen increased or diminished with the delirium.

Drs. T. L. Brunton and D'Arcy Power¹ have endeavored to distinguish the different albuminous bodies in the urine by determining the temperature at which albuminous urines coagulate. They found that the temperature of coagulation varied not only in the urine of different persons and different diseases, but also at different times in the urine of the same person. These variations are due, in part at least, to the acidity and to the amount of neutral salts of the albuminous solution. In addition, however, they found, upon experimenting with solutions of serum and egg albumen, that the amount of urea present had a decided influence upon the temperature of coagulation. A solution of blood serum in two thousand parts water, when containing one tenth to one fourth per cent. urea, coagulated at 160° to 162° F.; one half to five per cent. urea, at 162° to 170° F.; ten per cent. urea, at 168° to 172° F.; and when containing twenty-five per cent. urea it did not coagulate at all. Uric acid lowered the temperature of coagulation.

They also experimented with the soluble albuminous products of pancreatic digestion, and found the temperature of their coagulation to be about 128° to 134° F. The addition of urea and uric acid affected the coagulation temperature of these substances in the same manner as they did that of serum and egg albumen.

After diluting different urines with water to a constant low specific gravity (1005), in order to get rid, to some extent at least, of the effect of salts and urea, they still found the temperature of coagulation to vary. One set of urines coagulated at 160° to 173° F. (about the temperature at which serum albumen coagulates), a second set at 130° to 137° F. (about the temperature at which the products of digestion coagulate), while a third set coagulated at intermediate points (142° to 154° F.). This, in connection with the demonstrations of Stockvis and others that albuminous bodies may be absorbed from the stomach and intestines, and excreted unchanged in the urine, seems to point to the existence of two separate classes of albuminous substances in the urine: the albuminous products of digestion, and serum albumen, or a mixture of these.

Brunton and Power consider that many cases of albuminuria are probably almost or entirely due to disordered assimilation, and that in many cases of renal disease the loss of albumen is increased by disordered assimilation; that, therefore, further observations of the same nature as those they have pursued will be likely to prove valuable, in regard both to prognosis and treatment, inasmuch as they may result in enabling one to recognize those cases where the albuminuria is wholly

¹ St. Bartholomew's Hospital Reports, vol. xiii., 1877, page 283.

or partially due to disordered assimilation, and consequently to treat them more efficiently.

The authors found food to increase the quantity of albumen in the urine, or even to make it appear when it was absent during fasting. They also examined urines to discover the presence or absence of the digestive ferments, pepsine and ptyalin; and to ascertain whether other ferments, such as those of the pancreas and intestines, which are not usually present in urine, occur in albuminuria. In the urine of a patient suffering from chronic Bright's disease they failed to find pepsine, but observed a diastatic ferment, which might be ptyalin or the diastatic ferment of the pancreas; also the pancreatic ferment trypsin in very minute quantity. Paraglobulin was present in the same urine. In one case alcohol precipitated from the urine, deprived of albumen, a substance which gave reactions similar to those of peptone.

Action of Potassic Bicarbonate on the Urine. — Dr. Ralfe¹ has investigated the action of this salt on the reaction of the urine, and finds that it differs according as the alkali is taken before or after meals. He finds that when the bicarbonate is given in drachm doses one hour before dinner and one hour before supper, though the acidity of the urine is depressed on the day the bicarbonate is taken, there is, on the following day, a considerable increase as compared with the day preceding the administration. The reaction of the urine on the day of the experiment never remains alkaline more than two hours, while the acid passed in the following three hours amounts to but little less than the acid excreted in the corresponding five hours on the day preceding the experiment. The amount of uric acid excreted was increased on the days the bicarbonate was given. When, however, the bicarbonate was taken after food the acidity of the urine wholly disappeared, while on the succeeding day there was no marked increase in the acidity as compared with the day before. The urine remained alkaline up to the end of four hours after the administration of the salt, and no recovery of the acidity was noticed.

The results of these observations tend to show that the administration of alkaline bicarbonates when the stomach is empty increases the acidity of the urine, while their administration after a meal diminishes it. In view of these facts, he concludes that when these salts are given to diminish the acidity of the urine they should be given after food, while their use before meals is indicated in those cases in which the stomach itself contains free acids as a result of fermentative changes in undigested food. In this latter class of cases they would act chiefly as antacids.

Renal Calculus containing Indigo. — Dr. William M. Ord² gives a

¹ The Lancet, November 9, 1878, page 651.

² British Medical Journal, July 27, 1878, page 132.

clinical lecture upon the case. The patient, one of Dr. Bloxam's, died of malignant disease. The left kidney was reduced to the state of a lobulated cyst by a large medullary sarcoma, and contained a long, branched calculus, consisting chiefly of carbonate of lime. In the pelvis of the right kidney, which was increased in size, but otherwise normal, the indigo calculus was found. It had the shape of an oval disk, was seven eighths of an inch long, nine sixteenths broad, and one tenth thick. In color it was partly dark brown, in parts black; the black surface finely granular. It had the consistence of very hard chalk or slate. A careful examination led to the conclusion that it "consisted of a matrix of phosphates of lime and magnesia, with a little remains of blood clot; that the matrix was everywhere interpenetrated with indigo-blue with a little indigo-red; and that indigo-blue had been deposited in large proportion as an incrustation."

It is well known that normal urine contains a substance which, by its decomposition, furnishes indigo-blue with other products. Indigo has been found a few times as a sediment in urines which have undergone alkaline fermentation, but this is the first recorded case where it has been noticed in a calculus. There was nothing in the previous history of the patient to throw any light upon the cause of its deposition.

Indican. — W. Weber¹ employs a method of detecting indican in urine which is especially valuable in those cases in which the quantity of indican present is very small. The test is performed in the following manner: to thirty cubic centimetres of the urine in a large test tube is added an equal volume of concentrated hydrochloric acid, and the mixture warmed (not heated to boiling). One or two drops of dilute nitric acid increase the sensitiveness of the reaction. The mixture is then cooled by holding the tube in running water; a layer of ether two or three centimetres thick is poured upon it, and the whole is shaken well. After the ether has separated from the aqueous fluid there will be seen upon it a distinct blue froth, the color of which can be perceived, in those cases in which the quantity of indigo-blue is very small, by holding the tube between the eye and a white ground. If the blue color should not become evident after several minutes, a few drops of alcohol should be added. This will cause the froth to disappear, and the smallest quantity of indigo may then be recognized by the blue color of the ether solution. After a while the indigo-blue separates from the ether and forms a deposit between the two fluids, while the indigo-red remains dissolved in the ether. The author has only rarely failed to detect indican by this method.

Urobilin. — L. Disqué² has published the results of his investigations upon urobilin. They are as follows: The urobilin artificially prepared

¹ Archiv der Pharmacie, October, 1878, page 340.

² Chem. Centralblatt, No. 45, 1878, page 711, from Z. f. phys. Chem., 2, 259.

by Maly can hardly be considered a pure body. By the further reduction of bilirubin or urobilin there is obtained a colorless product which gives no absorption bands, and which upon treatment with chloroform on exposure to the air is changed to urobilin. This change takes place by the absorption of oxygen from the air. The presence of acids appears to favor it. In normal urine there is a body, evidently identical with Jaffé's chromogen, which corresponds in reactions to this reduced colorless urobilin. Urobilin itself is formed from this colorless compound by treating the urine with basic acetate of lead, alcohol, and hydrochloric acid. In pathological urines this colorless body is present with urobilin. The urobilin spectrum is much more marked if the urine is allowed to stand exposed to the air. In fresh normal urine the author could not distinguish the urobilin spectrum, as did Jaffé. On exposing the urine for a long time to the air, however, he frequently recognized the bands in concentrated urines. In pathological urines he found urobilin abundant in all diseases in which a very small quantity of urine was passed, especially in cases where there was free perspiration, and where there was stagnation of blood in the venous system, as in insufficiency of the heart, diseases of the lungs, especially pneumonia, etc. The quantity of urobilin is not proportional to the intensity of the fever. In very high fever there is often no urobilin to be found in the urine by means of the spectroscope. C. Gerhardt¹ has often observed urobilin in abundance in the brownish-red urines of jaundice which did not give Gmelin's (nitric acid) test for the biliary pigments.

Calcic Sulphate as a Sediment. — P. Fürbringer² reports a case in which the urine contained considerable white deposit of calcic sulphate. It occurred in the form of needle-shaped and prismatic crystals. The separation of calcic sulphate continued for several weeks. At first the sediment was passed with the urine; later, as the amount of sediment diminished, it was deposited only upon the cooling of the urine. The urine was diminished in amount, was dark colored, of high specific gravity, and strongly acid, but without abnormal constituents. The amount of sulphuric acid and calcium was increased. The author does not consider that the deposition of the calcic sulphate was due to this increase, since the latter still continued after the sediment ceased to appear. He believes that the deposit was caused by a diminution of the alkaline bases; the quantity of these not being sufficient to unite with the hydrochloric, phosphoric, and all the sulphuric acid to form soluble compounds, a portion of the sulphuric acid united with the calcium, which was present in large quantity, to form the sparingly soluble calcic sulphate.

¹ Maly's *Jahresbericht*, 1877, page 241.

² Maly's *Jahresbericht*, 1877, page 195, and *Centralblatt für die medicinischen Wissenschaften*, 1878, No. 14, page 254.

TOXICOLOGY.

The Effect of Certain Poisons on the Temperature of the Body. — A. Tamassia¹ has performed experiments with the view of determining the effect of phosphorus, arsenic, and strychnia upon the temperature of the body. Three grains of arsenious acid were injected into the thigh of a dog, and death ensued in thirty minutes. The temperature fell from 40° to 37.7° C. at the moment of death, a difference of 2.3° C. In a second experiment, where a dog died in seventy-five minutes after the injection of two grains of arsenious acid, the temperature fell 4.1° C. In a third experiment the temperature fell 3.2° C. The fall was at first about one tenth of a degree each minute; later, one tenth of a degree each two minutes up to the time of death. In the case of phosphorus the fall was more marked, and was about one tenth of a degree each fifteen minutes up to the time of death. Four grains were given to each of three dogs, and the temperature fell about equally in each case, the maximum being 4.7° C. In a rabbit which died in eight and one half hours the thermometer fell 7.1° C. In the case of strychnia there was a rise in temperature, at first about three tenths of a degree, later about one tenth of a degree, each minute. The mean rise was 3.2° C., death taking place in thirty to forty minutes. In view of these experiments the suggestion is made that the thermometer may hereafter prove a valuable aid to diagnosis in cases where the symptoms resemble those of acute poisoning.

THE ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.²

Cold Abscess. — A very suggestive paper was read by Dr. Sayre on The Traumatic Origin of Subfascial, Deep-Seated, or Cold Abscess, in which he took issue with the opinion of all the leading surgical authorities of the day that this is as a rule due to a scrofulous diathesis, and stated that his views were more in accordance with those of Sir Benjamin Bell, published in 1792. In support of the ground that he maintained he gave a detailed narration of six cases which had occurred under his own observation, one of them being that of his son, Dr. Lewis Hall Sayre. In all of them, as he conclusively demonstrated, the trouble could be directly traced to a traumatic origin, which was of identically the same character in each instance. His idea was that during some unusual muscular exertion a portion of the attachment of a muscle (it might be an extremely minute part) was torn away, and that in consequence of this an escape of blood or serum (although perhaps a very small quantity) took place. There was thus occasioned the presence of an unusually large number of wandering cells among the tissues, and in the course of time these, undergoing degenerative changes, became transformed into pus, and

¹ Centralblatt für die medicinischen Wissenschaften, 1877, No. 50, page 922, and the Dublin Journal of Medical Science, November 1, 1878.

² Concluded from page 267.

were multiplied indefinitely. The existence of an accumulation of pus would necessarily produce a profound effect upon the system, and yet the true cause of the trouble often remained entirely undetected for a long time on account of its being so deep-seated.

Dr. Moore, of Rochester, one of the best known surgeons in the State, expressed himself as extremely pleased with Dr. Sayre's views. He was glad, he said, that he had lived to see the day when he could hear such a paper, and he believed that it would undoubtedly inaugurate a new era in this department of surgery.

Laparotomy. — Dr. J. P. Creveling, of Auburn, read a paper on Laparotomy for Intestinal Obstruction, in which he presented the merits of the operation as determined by statistics, and the chances of relief which it afforded. In calculating the value of any operative procedure, he said, it is not merely necessary to collect the whole number of cases in which it has been performed, with the result of each, but also to consider the conditions under which each operation was undertaken. He had collected a more or less complete history of eighty-three operations. In a case of his own, which he reported in detail, the abdomen was laid open by an incision through the *linea alba*, extending nearly from the umbilicus to the pubes. The omentum was found much inflamed, and firmly adherent to the abdominal walls by recent attachments. The peritonæum was also inflamed throughout the portion of its surface brought into view, as were the intestines themselves. The latter were seen to be immensely distended with gas when the omentum was detached and folded back. Some six or eight feet of the bowels, comprising most of the jejunum, were then removed from the peritoneal cavity; and when the hand was passed down the gut, it was found to be firmly fixed on the left side of the spinal column. A closer inspection discovered a fibro-omental band thrown across the bowel, attached at either end to the side of the spinal column, and completely occluding the calibre of the intestine. The band was three eighths to half an inch in width, and very unyielding. It was tied at two points, and then divided with the knife between them, when the bowels immediately became distended below. No blood entered the peritoneal cavity. The patient sank, and died soon afterward. Dr. Creveling attributed her death principally to opium narcotism, as, by mistake, a larger quantity of morphia than he ordered was administered hypodermically. At the completion of the operation there were no signs of severe shock or extreme exhaustion, and not a single symptom that seemed to indicate a rapidly fatal termination of the case. At all events, it was conclusively proved that operative procedure was the only means at command which would have offered any possibility of relief.

The author, for the sake of convenience, made two general divisions of the cases of intestinal obstruction tabulated by him, — *first*, those due to intussusception, and, *second*, those originating from all other causes, — and the conclusions that he arrived at were as follows: (1.) That abdominal section for intestinal obstruction is not only justifiable, but eminently proper. (2.) That in cases of intussusception, as soon as milder means of disinvagination of the bowel fail, the operation should be promptly performed, provided the conditions are at all favorable. (3.) That in obstructions other than those caused

by intussusception the operation should be immediately done. (4.) That there is not as great an amount of danger in the operation as has been claimed by many.

Baptisia Tinctoria in Typhoid Fever. — A paper read by Dr. Laurence Johnson, of New York, on The Action of *Baptisia Tinctoria* in Typhoid Fever may be summed up as follows: *Baptisia tinctoria*, although formerly believed to possess antiseptic powers rendering it useful in diseases having a tendency to putrescence, has of late fallen into utter neglect with the regular profession. It is, however, extensively employed by the eclectics and homœopaths; the latter especially considering it very valuable in typhoid fever. It was to test its value in this disease that the experiments recorded were made. The preparation used was a tincture of the root, and it was administered in small doses (from one to five drops) at intervals of from one hour to three hours. The ordinary general measures of treatment, such as cool spongings, milk diet, and stimulants, when required, were not neglected, and any casual indications were promptly met and appropriately treated. Careful records of pulse and temperature were kept, and were shown in tables accompanying the paper.

Of the seven cases whose histories were detailed, three at least had at the beginning symptoms betokening attacks of severity. The pulse, temperature, and general condition of these patients left no room for doubt upon the point, yet the improvement under treatment was remarkable. In general, it may be stated that the cases, when treatment was well under way, were characterized by lack of symptoms sufficiently grave to occasion anxiety. There was a marked absence of delirium, and comparatively little diarrhœa, though at the beginning, in two or three of the cases, these were very troublesome features. The temperature seemed to be reduced by the drug, and in one case, where the morning temperature was as high as 106° F. when baptisia was employed for the first time, it never reached that point again, while the patient was fully convalescent in ten days. All the patients made good and comparatively quick recoveries.

Taken altogether, although the results obtained in such a small number of cases could not of course be considered conclusive, they appeared to establish a certain relation of cause and effect between the drug and the favorable course of the disease. The evidence on this point Dr. Johnson regarded as sufficient at least to encourage further trials, which he hoped no mere theoretical considerations would be allowed to prevent.

Fractures of the Femur. — Dr. Norman L. Snow, of Albany, read a paper on Some Practical Facts in Fracture of the Femur, verified by the Treatment, in Private Practice, of Twenty-Five Cases. All of the cases were treated by extension and counter-extension, the amount of force used depending on the obliquity of the fracture and the rigidity of the muscles. Dr. Snow remarked incidentally that he had been much surprised, when visiting some of the foreign hospitals a few years since, — more especially those in London, — to find fractures of the thigh under treatment without extension. One of the great benefits of this mode of treatment he considered to be the dispensing with tight bandaging, which was often the cause not only of delayed union, but of non-union from interference with the circulation of the part.

In children the author had found simple, uncomplicated fracture of the femur somewhat different in form, and thought that it required a modification in treatment, when compared with the same injury to the adult. It was more likely to be of the variety known as "green-stick," being bent at an angle and not broken; but if forced beyond this point, it gave way,—usually transversely to the long axis,—and the ends were found to be quite jagged and irregular. A high lounge, without side pieces, he regarded as preferable to a bed in the case of children, because when this was used there was nothing which they could get hold of and thereby attempt to draw themselves up towards a sitting posture, and, being high up, they seemed more content to lie on their backs. He spoke of the disadvantages of plaster dressing in the case of children, and also stated that he never felt at ease in applying it even in simple fracture occurring in the adult, for the reason that he thought that an examination should occasionally be made during the first four weeks, so that the surgeon could be satisfied that the ends of the fragments were in proper apposition. Besides, however nicely the dressing might be applied, in a few days there was usually found to be a space between the limb and its encasement, sufficient for distinct motion, and even displacement. He believed it to be of service, however, after enough callus had been thrown out, to keep the fractured ends in apposition, as an additional support, and also from the beginning, in cases of compound fracture and in fractures of diseased bones, when, from the sinuses present, a constant discharge is kept up.

Adulteration of Food and Medicine.—*A State Board of Health.*—Dr. E. R. Squibb, of Brooklyn, besides presenting a Note on the Estimation of Urea, and his views on the revision of the United States Pharmacopœia in 1880, read a paper which embodied a draught of a Proposed Law to prevent the Adulteration of Food and Medicine, and to establish a State Board of Health. To be effective, such a law, he said, must avoid certain points of difficulty met with in the British act of 1875. It must so clearly define the offense of adulteration in all its various forms as to be plain to the understanding. General definitions, which leave too much to be decided by the courts, must be avoided. The proposed law defines the various forms of adulteration, in language that is perfectly unmistakable, under nine distinct heads, and provides suitable penalties in a fine not to exceed two hundred dollars for the first offense, and a term of imprisonment for the second. Dr. Squibb believed that if the offense were well defined to the person who adulterates, the first effect would be to deter him. Failing in this, it would make the facts establishing the offense so clear as to economize the time of the courts and law officers, and leave to them to decide mainly upon the character, turpitude, and degree of the offense charged, and thus adjust and apply the penalty. Under such a law the offense would be easily proven by the debased article, and a plea of absence of intent to defraud or to injure would simply amount to a plea of ignorance, and would influence the courts not so much on the question of conviction (because the public offense of debasement had been committed) as on the question of the extent to which the adulterator should suffer in order to prevent others from similar acts through similar ignorance.

On account of the great objections to most of the ordinary provisions for

carrying such laws into effect, Dr. Squibb proposed the establishment of a state board of health, which should be selected by the governor, and should consist of two physicians, one chemist and physicist, one lawyer, and one business man. By it should be appointed a board of inspectors and board of prosecution, whose duty it should be to detect and prosecute violations of the law. It was recommended that the president and secretary should each receive salaries of \$3000 annually, the other members \$2000, and the inspectors and prosecutors \$4000 each. Such a board as was provided for in the draught of the law accompanying his paper, Dr. Squibb stated, would cost the State about \$80,000, not trusting to fines or other sources of revenue to reimburse any part of the expense, while the losses to the people by adulteration, in mere money value, were estimated at not less than \$700,000 a year.

One very interesting portion of the proceedings was the evening session on the first day, when Prof. John C. Dalton read a paper on Scientific Ghosts, and Prof. H. D. Noyes, of the Bellevue Hospital Medical College, delivered an Address on Ophthalmology, with Illustrative Demonstrations. On this occasion a calcium light, under the direction of Dr. Wm. B. Fish, of Albany, contributed no little to the entertainment and instruction of the audience present.

The governor and both houses of the legislature, by a special resolution, were invited to be present at the delivery of the annual address by the president in the new assembly chamber, and all members of the legislature who were physicians in good standing were asked to attend the regular session and take part in the discussions of the society.

NAPHEYS'S MEDICAL THERAPEUTICS.¹

THE favorable reception with which this work has met has made a sixth edition already necessary, which contains many of the recent advances in therapeutics and important additions on many subjects, such as typhus fever, yellow fever, and children's diseases. But the vast number of prescriptions compounded of many drugs, more or less empirically, after the formulæ of many authorities, strike us as sometimes more confusing to the practitioner than in accordance with the simplicity and greater precision which are the *desiderata* of modern therapeutics.

FINLAYSON'S CLINICAL DIAGNOSIS.²

THIS useful manual contains contributions from Professor Gairdner of Glasgow, on the physiognomy of disease; Dr. Finlayson on case-taking,

¹ *Modern Medical Therapeutics*. A Compendium of Recent Formulæ and Specific Therapeutical Directions. By GEORGE H. NAPHEYS, A. M., M. D., etc. Sixth Edition, enlarged and revised. Philadelphia: D. G. Brinton. 1879.

² *Clinical Diagnosis*. A Hand-Book for Students and Practitioners of Medicine. Edited by JAMES FINLAYSON, M. D., Physician and Lecturer on Clinical Medicine in the Glasgow Western Infirmary, etc., etc. With eighty-five illustrations. Philadelphia: Henry C. Lea. 1878.

family history, and the symptoms of disorder in the various systems; Professor William Stephenson on disorders of the female organs; Dr. Robertson on insanity; Dr. Samson Gemwell on the sphygmograph and the physical examination of the chest and abdomen; and Dr. Joseph Coats on laryngoscopy and on the method of performing post-mortem examinations. The various sections are written with a view to the practical requirements in so condensed a volume, of which the value is greatly enhanced by the numerous illustrations and the extensive bibliography of the important treatises on the subjects which are thought most suitable for consultation. The American edition is a creditable reproduction of this work of the Glasgow physicians.

WORTHLESS PERIODICALS.

THE warfare which we have waged unremittingly against the present tendency of the times to patronize cheap and local literature, instead of giving support to a few able and representative journals, is beginning to bear fruit, and we are glad to be able to publish the following comments on Dr. Billings's recent article from a journal whose position entitles its opinion to great respect, the *Chicago Medical Journal and Examiner*. We trust the time will soon come when physicians will appreciate the great advantages to be gained by concentrating their patronage upon a few representative journals, and the positive injury they do to medical literature by subscribing to a purely local journal "run" in behalf of some "interest."

"We could wish that Dr. Billings, or some other writer of equal ability, might have the courage further to divide the fifty-three survivors into two classes: the one to represent the journals which are conducted with a view solely to the advancement of science; the other to include those which are the pure and simple advertisements of individuals, medical schools, or dealers in drugs. . . .

"We have carefully perused the list of the fifty-three surviving journals, and have deliberately concluded that but from fourteen to twenty are of any permanent value to the profession, and worthy of general circulation or to be sent abroad and handed down to posterity as fit exponents of American medical periodical literature. Some of the others possess no value whatever apart from the gleanings which they regularly make from the crops carefully harvested by their more flimsy neighbors. Some are absolutely worthless, judged from any stand-point, and a few are undeniably worse than worthless, — they are dangerous and disgusting parasites upon the body medical.

"Of this latter class are the cheap publications which aim to be classed as medical journals, but which are really the clumsily disguised advertising sheets of certain pretentious drug-houses of doubtful reputation. . . .

"The sterling common sense of the mass of the physicians throughout the country must supply the remedy for this evil. We call upon every good man, who values his own reputation, and who cares for the elevation of the standards of the profession he has chosen, to contribute money for the support of the best medical journals, and of these only. In this connection we do not ask such to subscribe for this particular journal. The subject is one of such im-

portance that if the desired result could be completely attained by the suppression of this periodical, we would gladly make the sacrifice in the interest of the profession at large. . . .

"It is the duty and interest of every physician in the land to support heartily the best of our journals, and none other. Let it be understood that it is a stigma upon one's reputation that his name has appeared in an obscure advertising sheet, in connection with the indorsement of a questionable 'novelty' in drugs, or even as an author. And we call upon the editors of the respectable medical journals of America to refuse an exchange with every periodical of doubtful character and provincial position. That will be a bright day for medical journalism in the United States which sees the organization of an associated medical press, membership to which will be restricted to the managing editors of really good journals in existence, the privilege of membership and exchange to be granted only by unanimous consent of those already in enjoyment of these privileges. Under such an arrangement, advertising firms and book publishers might cease to offer a premium for mediocrity and worthlessness in the periodical medical literature of our land."

We have the material for producing as fine a set of journals as is to be found in any country. Why thus persistently hide our light under this bushel waste-basket of paper? We have never looked upon the editors' association as an organization possessing any special *raison d'être*. An associated medical press embracing a few of the best journals, with a distinct object in view, would, we think, be a valuable agent in bringing about the desired reforms.

THE MEDICAL LITERATURE OF THE WORLD.

THE first number of the *Index Medicus*, edited by Dr. Billings, and published by Leypoldt, of New York, has made its appearance, and fully justifies the expectations held in regard to it. The object of this publication is to continue into the future the ground covered by the Index Catalogue of the Library of the Surgeon-General's Office at Washington in the past. It is hoped that Congress may have given the necessary appropriation in the sundries bill just passed. The hearty indorsement of the present enterprise by the profession will undoubtedly have influence in bringing about the much-desired object. The periodical is to be a monthly one, and will give a classified list of the literary work of the entire medical world of the previous month. The December number will contain a double index of authors and subjects for the year. A page of each number will be devoted to bibliographical notes and queries. The first of the series is issued as a specimen of the work proposed, and covers the last three months of 1878. The amount of information to be derived from a mere perusal of such a periodical can hardly be realized by one who is not familiar with the refinements to which this business of cataloguing has been carried. It is useful and interesting to *everybody*, whether he be a "bookworm" or not. The manner in which the publishers have done their part is satisfactory to the most exacting of the class we have just mentioned, and as the price is but three dollars a year we hope all who feel they can afford this small sum will aid in this truly public-spirited enterprise.

MEDICAL NOTES.

— Dr. R. H. Fitz has been appointed professor of pathological anatomy in the medical department of Harvard University. He will be a worthy successor in this department to the late Dr. J. B. S. Jackson. The curatorship of the Warren Museum of Anatomy, left vacant by the death of Dr. Jackson, has not yet been filled. Dr. H. H. A. Beach has received the appointment of visiting surgeon of the Massachusetts General Hospital, and Dr. W. S. Bigelow succeeds him as surgeon to out-patients.

— Many of the younger members of the profession will learn with regret that General Post, who has so long held the office of consul-general to Austria, will soon leave Vienna, his successor having already been appointed. For more than ten years General Post has been at Vienna, and, during that time, has always been ready and anxious to render any service which lay in his power to the American medical students who have so long made that city their head-quarters.

— M. About says that an election to the once-famous French Academy is no longer coveted by any writer of authority in France.

— Freund, of Breslau, goes to Strasburg to assume the chair vacated by Gusserow.

— Dr. Macewen, of Glasgow, whose observations are deemed authoritative by his British contemporaries, lays it down as a rule that an insensible person, who, being left from ten to thirty minutes, has contracted pupils, which dilate on his being shaken, without any return of consciousness, the pupils contracting again, can be under no condition but that of alcoholic coma. Dr. Macewen considers this test differentially diagnostic between alcoholism and apoplexy. The *Lancet* thinks more trial is needed before the test can be accepted. All things being equal, a drunken man will have a low temperature, while that of the apoplectic will be abnormally high.

— The *Practitioner* for December, 1878, states that the spirit of walnut (*spiritus nucis juglandis*) has been successfully used by Dr. E. Mackey in various forms of vomiting after other remedies had failed. It was given in drachm doses three times daily.

NEW YORK.

— The commencement of the medical department of the New York University was held at the Academy of Music on the evening of February 18th, and the number of graduates was exceptionally large, — two hundred and five. The usual prizes were awarded, and the valedictory address was delivered by William Carey Davies, of the graduating class, who took for his subject *The Relations of the Medical Profession to Society*. The address to the class was by the Rev. Dr. Howard Crosby, chancellor of the university, and was a very excellent effort of the kind. The advice given in the following extract from it might be appropriated with advantage by many who are not just receiving their diplomas: "My third jewel is from the Solomonian storehouse: 'Pleasant words are health to the bones,' which may also be read: 'A doctor's cheerfulness is often as good as his physic.' For if you would have pleasant words come naturally and abundantly, they must well up from a cheerful heart. I wish some one of you would occupy the leisure of the next year,

while you are waiting for patients, in studying the curative properties of cheerful manners in the sick-room, and then publish your discoveries in a manual for the professors to use with their classes. . . . Men with long faces and who are fond of sighing should never become doctors. Medicines must sometimes be disagreeable, but doctors should never. A physician's face should be like sunshine, and his voice like wedding bells. Who could get well with Polyphemus as physician and Medusa as nurse?"

— Although the reports of disease among cattle in this neighborhood have no doubt been greatly exaggerated, it now seems that there has been enough to warrant measures of precaution against its spread, and the legislature has promptly passed a bill (which was at once approved by the governor) appropriating ten thousand dollars for the carrying out of a law enacted last year, entitled, "An act in relation to infectious and contagious diseases of animals." Professor Law, of Cornell University, and Gen. M. R. Patrick have been invested with full power to investigate and adopt suitable measures for the suppression of all disease among cattle, and have been pursuing the work with great activity.

Thus far pleuro-pneumonia has been almost entirely confined to a narrow strip on Long Island and the southern part of Westchester County. In the mean while the Brooklyn Board of Health has been waging war against the stalls where swill-fed cows are crowded together in the filthiest quarters at Blissville, Long Island; while in New York, Dr. Liantard, consulting veterinary surgeon, and Dr. J. B. White, milk inspector, of the board of health, have been making a thorough investigation of the cows owned in the city, as well as an examination of the milk sent from the country. Up to February 18th one cow had been found suffering from acute pneumonia, and only one other from pleuro-pneumonia.

— During the coming spring the Academy of Medicine expects to put up a considerable addition to its present building, and will thus be able to secure a much larger and commodious hall for its own meetings and those of other professional and scientific societies.

— The average number of cases of scarlet fever reported each week remains about two hundred, and of diphtheria about sixty.

PHILADELPHIA.

— The committee of the County Medical Society on hygiene and the relations of the profession to the public have, among other questions now under consideration, that of the expediency of obtaining legislation authorizing the confinement of inebriates, and it is expected that a draught of a law having this object in view will be presented to the legislature at its present session.

— At a recent meeting of the Philadelphia Pathological Society, Dr. A. S. Reynolds exhibited a specimen of a double uterus, both sides being functionally active. Menstruation began at fifteen years; the patient had one child six years later, and a second at twenty-four years, just two weeks before death from typho-malarial (?) fever. Each confinement was followed by profuse post-partum hemorrhage. The uterus appeared to be about normal in size and weight, but was found to be double in all its parts above the external os. The

uterus in the line of the genital canal was unicornous and two and one half inches in length; involution from the last pregnancy was not quite complete. Beginning at the margin of the external os on the right side, and running at right angles to the median line, is a canal, but little less in diameter than the normal cervix, three fourths of an inch in depth, expanding into a triangular cavity of the body of the second uterus, which measured one and one half inches in length, two in circumference, and one inch in diameter. From the fundus a normal Fallopian tube was given off; the ovary exhibited several cicatrices. It was believed that the constant menorrhagia and post-partum hæmorrhages were in some way produced by the malformation. As both divisions were functionally active, double conception was possible.

— Dr. Chas. K. Mills reported a case of fibroma of the brain, compressing portions of the first and second right frontal convolutions mainly, with anterior part of convolution of corpus callosum, and also the corpus callosum itself to a slight extent. The motor phenomena (weakness of all the extremities, but particularly the left arm, involuntary evacuation of bladder and rectum, loss of sight, etc.) were believed to be inhibitory and not direct. The general temperature was slightly below the standard of health as a rule, but the day before death was 100.3° to 100.4° F.

Some interesting observations in cerebral thermometry were made, which appeared to prove that a positive value may be placed upon local thermometry in the regional diagnosis of intracranial tumors. The temperature of the surface near the seat of the growth is higher than that of other regions (about 1.5° in this case), probably owing to the associated hyperæmia and inflammation.¹

Dr. Mills also reported at a recent meeting of the County Medical Society three cases of brain disease with paralysis, which apparently agreed with the current theory of localization.

LETTER FROM NEW ORLEANS.

YELLOW FEVER.

MR. EDITOR,— Yellow fever ceased here as an epidemic in November, but did not disappear until the early part of January. Since then we have had ice and snow, with a temperature of 20° F., and it is altogether probable that the unusual severity of this winter will effectually destroy all the fever infection in the city. This conclusion is warranted by the entire absence of the fever in 1861, following the severe winter of 1860–1; and by the same non-appearance in 1877, after a severe winter, the only case of that year having come through the quarantine as a “walking case,” by practicing deception on the quarantine physician.

With all the destruction of human life (4046 deaths for New Orleans alone) and the pecuniary losses inflicted by the epidemic, it has not been an unmixed

¹ The reader is referred, for the history of this case, to a clinical lecture by Professor Da Costa in the Medical and Surgical Reporter, vol. xxxviii., page 414, *et seq.*; and for the subsequent details and autopsy, to Dr. Mills's report in the Philadelphia Medical Times, vol. ix., page 184 to 191.

evil, for it has contributed more to the actual "reconstruction" of our lately dissevered country than all the political tinkering since 1865. But, though this is the general conviction and the value of the gain is fully appreciated, there is no desire to take another such benefit.

Our general assembly adjourned on the 1st inst., having sat out half the time allowed by law. Much was expected in respect to sanitary legislation, and nothing performed. Shortly before the meeting of the legislature, an effort was made to enlist the medical profession throughout the State in a combination to influence their representatives in favor of certain bills promotive of the sanitary welfare of our whole people. A circular, containing the text of the bills and some explanatory remarks, was extensively disseminated among medical men, and it was hoped that the lesson of the recent epidemic would not be lost to the legislative memory. This circular was sent out by authority of the State Medical Association, through a committee appointed to promote state medicine.

As the organization of our board of health is peculiar, a few words on the subject may here be appropriate and interesting to your readers. It consists of nine members, and formerly the law declared that "they should be chosen with reference to their known zeal in favor of a quarantine system." This condition was struck out two years ago, when the law underwent several other changes. Previous to that time six of the members had been appointed by the governor and three had been elected by the authorities of New Orleans, and all held office for one year only. The new act provided that the term of office should be extended to four years, but it was so arranged that four and then five members should go out every alternate year; and at the same time the city was given five members, instead of three. The reason of this mixed representation on the board is found in its compound duties. It is charged with the execution of the quarantine laws and the superintendence of the several quarantine stations, and besides with the sanitary supervision of the city of New Orleans. Though the board is held responsible for the administration of quarantine, the officer at the principal station, on the Mississippi River, is appointed by the governor, and is allowed to choose his own assistant. Every effort to change the law, so as to give this appointment to the board of health, has failed, because such a measure would diminish the governor's patronage. The consequence is that the present incumbents at that station were not selected for any fitness, but by favor of the governor. The chief officer lately testified before the congressional yellow fever commission that he had not seen a case of yellow fever since 1855 up to the time of his appointment, late in 1877. His assistant was not at all more familiar with the disease, and it is not strange that the Emily B. Souder was allowed to pass with a walking case of yellow fever aboard, on May 22, 1878. Another case was developed in the crew soon after her arrival at the city, and from these two our great epidemic is supposed to have originated.

Heretofore the plan of disinfection at our quarantine stations has not required the unloading of vessels, and it is clear that the work could not be thoroughly done in a hold filled with boxes of sugar or bags of coffee. Besides, nothing of the kind was done until quarantine was declared against certain infected ports by the governor's proclamation, generally taking effect in May,

unless there happened to be cases of some infectious disease aboard. It is plain, therefore, that infected cargoes from ports never visited by frost might be brought to our city without any disinfection whatever at a time of the year when we have had several weeks of temperature above 80° F. With such quarantine regulations, it is unnecessary to invoke the doctrine of the domestication of yellow fever in New Orleans, or to pretend that it depends on some undefined local conditions, which are always found wanting the next season after a severe winter.

The sanitary functions of our board of health in the city of New Orleans, together with some other points suggested by the letter of your correspondent to our *Medical Journal* in November last, must be reserved for a future communication, as this is already sufficiently prolonged.

S. S. H.

NEW ORLEANS, February 6, 1879.

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 15, 1879.

Cities.	Popula- tion estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from					
				The Princi- pal "Zymot- ic" Diseases.	Pneumo- nia.	Diphtheria and Group.	Scarlet Fe- ver.	Diarrhoeal Diseases.	
New York.....	1,085,000	554	26.86	21.48	9.92	3.79	12.44	0.90	
Philadelphia.....	—	349	—	—	15.18	11.52	11.52	—	
Brooklyn.....	564,400	212	21.08	16.98	13.21	7.08	4.25	2.36	
St. Louis.....	—	103	—	8.73	12.61	4.87	—	—	
Chicago.....	—	135	—	14.01	8.82	8.01	1.44	—	
Baltimore.....	365,000	160	22.86	13.75	10.63	6.88	8.75	—	
Boston.....	356,500	155	22.68	18.71	12.26	9.68	1.23	1.29	
Cincinnati.....	—	—	—	—	—	—	—	—	
District of Columbia...	160,000	82	26.71	12.17	19.50	3.65	6.09	1.22	
Pittsburgh.....	—	67	—	19.40	20.88	11.74	1.49	—	
Milwaukee.....	—	40	—	12.50	10.00	10.00	—	—	
Providence.....	101,000	41	21.15	31.71	4.88	17.07	12.20	—	
New Haven.....	—	22	—	—	27.27	—	—	—	
Charleston.....	—	35	—	5.71	5.71	2.86	—	—	
Lowell.....	53,300	19	18.58	21.05	6.26	5.26	5.26	—	
Worcester.....	52,500	19	18.87	10.53	15.80	5.26	—	—	
Cambridge.....	51,400	21	21.29	14.29	14.29	4.76	—	—	
Fall River.....	48,500	—	—	—	—	—	—	—	
Lawrence.....	38,200	15	20.43	13.33	33.33	—	—	—	
Lynn.....	34,000	13	19.94	7.69	23.08	—	—	—	
Springfield.....	31,500	6	9.93	33.33	16.67	16.67	16.67	—	
New Bedford.....	27,000	—	—	—	—	—	—	—	
Salem.....	26,400	6	11.85	33.33	33.33	16.67	16.67	—	
Somerville.....	23,350	12	26.80	25.00	16.67	16.67	8.33	—	
Chelsea.....	20,800	3	7.52	—	33.33	—	—	—	
Taunton.....	20,200	4	10.32	25.00	25.00	25.00	—	—	
Holyoke.....	18,200	6	17.19	33.33	16.67	16.67	—	—	
Gloucester.....	17,100	9	27.44	11.11	11.11	11.11	—	—	
Newton.....	17,100	3	9.15	33.33	33.33	—	—	—	
Haverhill.....	15,300	4	13.63	25.00	25.00	25.00	—	—	
Newburyport.....	13,500	4	15.45	—	—	—	—	—	
Fitchburg.....	12,500	6	25.03	—	—	—	—	—	

Two thousand and forty-six deaths were reported: 382 from consumption, 214 from pneumonia, 112 from scarlet fever, 90 from diphtheria, 78 from bronchitis, 32 from croup, 26 from whooping-cough, 23 from typhoid fever, 14 from diarrhoeal diseases, 14 from cerebro-spinal meningitis, 12 from erysipelas, two from measles, none from small-pox. Allowing for Cincinnati, not reported, there is shown an increased total mortality and from pulmonary diseases, diphtheria, cerebro-spinal meningitis, and measles; about the same from diarrhoeal diseases, and a decrease from the remaining "zymotic" diseases. Philadelphia reported 71 deaths from acute pulmonary diseases, not included in the above.

From *bronchitis*, 35 deaths were reported in New York, 14 in Chicago, nine in Brooklyn, seven in Pittsburgh, four in St. Louis and Baltimore, two in Milwaukee and Charleston, one in District of Columbia. From *whooping-cough*, 18 in New York, three in Brooklyn, two in Baltimore, one in District of Columbia, Pittsburgh, and Lowell. From *typhoid fever*, seven in Boston, five in Philadelphia, three in Chicago and Pittsburgh, two in Brooklyn, one in Baltimore, Lawrence, and Holyoke. From *cerebro-spinal meningitis*, three in Chicago, two in New York, one in St. Louis, Baltimore, Providence, Charleston, Lowell, Worcester, Cambridge, Lawrence, and Lynn. From *erysipelas*, three in New York, St. Louis, and Boston, two in Brooklyn, one in Cambridge. From *measles*, one in New York and Baltimore. Baltimore reported one from *trismus nascentium*. In Washington and Savannah the death-rate among the colored population was double that of the whites. The returns from sixteen of the nineteen cities in Massachusetts, with a population of 763,850, showed a decreased mortality from whooping-cough, about the same from erysipelas and diphtheria, and increased from the other zymotic diseases, particularly typhoid fever. Acute diseases of the respiratory organs were very prevalent in Nashville, where no deaths from "zymotics" were reported, in Louisville, Richmond, San Francisco, and in New Orleans. Scarlet fever was prevalent in Buffalo and Richmond; diphtheria in Buffalo and San Francisco, influenza in Mobile, and catarrh in Buffalo. No deaths from diphtheria or scarlet fever in New Orleans.

Sergeant Pursell's meteorological record for the week, in Boston, is as follows:—

Date.	Barom-eter.	Thermom-eter.		Relative Humidity.			Direction of Wind.			Velocity of Wind.			State of Weather.			Rainfall. (Melted Snow.)	
	Daily Mean.	Daily Mean.	Minimum.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	9 P. M.	2 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration in Hours.	Amount in Inches.
Feb. 9	30.091	24 35	17	71.61	52.61		S	W	NW	12	16	13	F	F	C	8.7	0.05
" 10	30.448	18 27	8	79.84	57.56		NW	NW	S	14	10	6	C	C	H	—	—
" 11	29.939	42 51	21	70.59	84.71		SW	SW	W	14	20	23	F	F	R	—	—
" 12	29.851	38 52	29	100.66	53.73		S	W	W	27	16	22	R	O	C	17.2	1.53
" 13	29.844	25 35	17	75.40	57.57		W	W	W	7	19	15	C	F	C	—	—
" 14	30.145	15 23	11	61.92	55.49		NW	W	NW	10	10	9	C	C	C	—	—
" 15	30.389	16 23	7	57.32	33.41		W	W	W	8	7	2	C	C	C	—	—

Weekly Summary.	Barometer.	Thermometer.	Humidity, Saturation being 100.	Wind.	Rain.
	Mean 30.033	Mean 23.6	Mean 58.6	Total miles traveled, 2130.	Total amt. 1.53 in.
	Max. 30.491	Max. 52	Max. 100	Prevailing direction, W.	Duration, 21 hrs. 10 min.
	Min. 29.132	Min. 7	Min. 32		
	Range 1.359	Range 45	Range 68		

Barometer corrected for temperature, elevation, and instrumental error.

Explanation of weather symbols: O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., snow; L. S., light snow; T., threatening.

Station: Latitude $42^{\circ} 21'$; longitude $71^{\circ} 4'$; height of instrument above the sea, 77.5.

For the week ending January 18th in 149 German cities and towns, with a population of 7,532,088, the death-rate was 27, an increase from 24.8 of the preceding week, referable chiefly to pulmonary diseases. Of 5848 deaths, 552 were from consumption, 425 from acute diseases of respiratory organs, 178 from diphtheria and croup, 85 from scarlet fever, 50 from measles, 46 from whooping-cough, 27 from puerperal fever, three from typhus, one from small-pox. The death-rates were in Berlin 27.4; Bremen 26; Breslau 31.2; Carlsruhe 17.7; Cologne 29.7; Dantzic 40.7; Dresden 29.8; Frankfort-on-the-Main 20.1; Hamburg 29; Leipzig 24.6; Munich 33.9.

The death-rate for the week ending February 1st, for the twenty large English towns, with a population of 7,383,999, was 26.2, a trifle greater than for the previous week: for London 26.2, Bristol 20.4, Birmingham 27.4, Liverpool 35.7, Manchester 34.9, Plymouth 16.9. Pulmonary diseases, scarlet fever, and whooping-cough were most prevalent; small-pox

was fatal only in London, where there were 28 deaths, an increase of 4 from the previous week. Small-pox was also fatal in Dublin, where the death-rate from all diseases was 49; in Edinburgh 25 and in Glasgow 29. At last accounts, fevers were causing great mortality in India, with fewer deaths from cholera. Small-pox was prevalent in Calcutta, Paris, Vienna, Budapesth, and Venice, very rife in St. Petersburg; there were a few cases in Brussels, Geneva, and Bucharest. Diphtheria was very prevalent in Paris and Vienna, less so in the German cities, and somewhat in Egypt and Italy. Typhoid fever prevailed extensively in Paris and St. Petersburg, and to a certain extent in most of the continental cities.

Great destitution and mortality continue in Brazil, with a hope of beginning abatement. The plague is reported to be causing less anxiety to those cities of Europe whose sanitary condition is so bad as to make an importation of the disease much to be dreaded.

CIRCULAR.—Owing to the crowded state of the columns of the *BOSTON MEDICAL AND SURGICAL JOURNAL*, and in view of the fact that many of the medical societies are greatly in arrears in their reports intended for publication, the editor, while availing himself of the opportunity to thank them for their valuable support, would take the liberty to suggest that a greater condensation of the reports of cases presented by individual members for publication would lead to mutual benefit. It is thought that the main points of interest in a case can usually be presented in half of a printed page. Collections of similar cases prepared with special care, from which general conclusions may be drawn, and papers of importance can be printed in full, as heretofore, as original articles. By some such expedient the proceedings would appear more promptly than they do at present, and their interest and value would, we think, be increased.

GYNÆCOLOGICAL SOCIETY OF BOSTON.—The one hundredth regular meeting will be held at the Medical Library Rooms, 19 Boylston Place, first Thursday of March, at two o'clock, P. M.

The following papers are promised: Menstruation, by R. P. Loring, M. D. My Stem Persary, by E. Cutter, M. D.

Profession invited.

HENRY M. FIELD, M. D., *Secretary*.

JEFFERSON MEDICAL COLLEGE.—The summer course of lectures will begin on Monday, March 24, 1879, and will be continued until Saturday, June 14th.

BOOKS AND PAMPHLETS RECEIVED.—Diphtheria: Its Nature and Treatment, Varieties, and Local Expressions. By Morell Mackenzie, M. D. Lond. Philadelphia: Lindsay and Blakiston. 1879. (A. Williams & Co.)

The Influence of Posture on Women in Gynecic and Obstetric Practice. By J. H. Ave-ling, M. D., Physician to the Chelsea Hospital for Women. Philadelphia: Lindsay and Blakiston. 1879. (A. Williams & Co.)

Naval Hygiene. Human Health and the Means of Preventing Disease. By Joseph Wilson, M. D., Medical Director United States Navy. Second Edition. With Colored Lithographs, etc. Philadelphia: Lindsay and Blakiston. 1879. (A. Williams & Co.)

Annual Report of the Butler Hospital for the Insane. Providence. 1879.

Twelfth Annual Report of the Minnesota Hospital for the Insane. Minneapolis. 1879.

First Annual Report of the Presbyterian Eye and Ear Charity Hospital. Baltimore, Md. 1879.

Diphtheria and its Treatment. Epidemic of 1875-76. Meriden, Conn. By Chas. H. S. Davis, M. D. (Reprint.) Louisville, Ky. 1879.

Charter and By-Laws of the Pittsburgh Academy of Medicine and School of Anatomy. Pittsburgh. 1878.

New York Academy of Medicine. 1879. Addresses. Dr. Samuel S. Purple's Valedictory. Dr. Fordyce Barker's Inaugural.

A Case of Progressive Muscular Atrophy with Sclerosis of the Lateral Columns. By Dr. J. C. Shaw, President. New York Neurological Society, etc. (Reprint.) Chicago. 1879.

Athill's Diseases of Women. Fifth edition revised and enlarged, with Illustrations. Philadelphia: Lindsay and Blakiston.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

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LECTURES.

BOSTON CITY HOSPITAL: CLINICAL LECTURE NO. XI.

BY DAVID W. CHEEVER, M. D.,

Professor of Clinical Surgery in Harvard University.

Chronic Disease of the Knee. — GENTLEMEN: This little girl has been brought in to be shown to you, and to have an exploration of the knee-joint. She is now eleven years old. At the age of six years her knee began slowly to enlarge. After prolonged exercise it sometimes gave her trouble, otherwise none at all. Nine months ago she fell, and since that time her knee has gradually grown worse. This is the only history we have.

In comparison, the two knees, as you readily observe, are unlike. The left is apparently normal. The right is very much deformed, and in two directions, namely: it is enlarged in front; it is widened between the condyles. On its anterior surface the veins are dilated as they are not upon the same portion of the sound knee. There is, besides, over the inner condyle a peculiar swelling, which does not exist over the same condyle of the left leg. In the popliteal space I discover nothing abnormal, but now notice a slight appearance of a tendency to dislocation. On palpation I find the swelling soft and fluctuating, and inasmuch as it followed a chronic injury it probably contains pus and is a cold abscess. The knee-joint is bounded by a capsule, which is similar in both knees. When, therefore, we have a synovitis of this joint there is a uniform, spindle-shaped enlargement, extending high up the thigh under the tendon of the quadriceps extensor muscle. Unsymmetrical swelling consequently indicates cold abscess outside the capsule. On the other hand, we have a history of enlargement of the joint, as well as partial immobility from adhesions. In spite, then, of the unsymmetrical form of the abscess, there seems to be a probability that it is in some way connected with the joint. What should be the treatment? The child is in a fairly robust condition, so that the question arises, Shall we not open the abscess to-day? I think it the proper course, but in order to avoid admitting air into the joint shall pump off the contents by means of the aspirator.

In the recent case of cold abscess from caries of the spine we aspirated twice, but the abscess refilled. We then opened it with a knife, and found a large cavity which we allowed to drain under a poultice. What followed? Severe sickness, threatening peritonitis, a low grade of pneumonia, and a generally bad condition, from which the patient escaped with difficulty. The abscess is now accustomed to the air, and the patient will recover, but with a discharging sinus. I have mentioned this case simply to show you the effect of laying open a cold abscess. In the case before us, then, we will open subcutaneously, and afterward wait a fortnight for the results. We shall probably give discharge to a thin fluid with cheesy lumps. By and by will arise the question of excision, from which operation the child might recover with shortening of the limb, but would have a stiff joint. Excision, however, is oftener fatal than amputation above the knee. Consequently, I do not feel justified in doing anything in the direction of operative treatment. For the present we will strap the part and apply extension, and if no improvement follow, the question of amputation or other interference will then arise. In evacuating the abscess we find the skin so thin that the usual primary incision is not necessary. I now introduce the needle, and use aspiration. The pus which flows is very thick, and quite unlike what I expected to see. It does not suggest a connection between the abscess and the bone, as it would if it were thin, oily, and flaky. We have drawn about one ounce, and the swelling goes down. For that reason we hope the abscess has nothing to do with the knee-joint. In that case the trouble may end in a cure by ankylosis of the joint. The two knees are now more alike; what remains of the apparent deformity is hard bone, and you see even more than before the evidence of the outward dislocation. This is probably due to a relaxed condition of the internal lateral ligament, which permits an outward movement of the head of the tibia. The character of the pus and the position of the abscess lead me to consider the latter traumatic in character. I now propose to apply a ham splint and rest, and by and by an iron splint, like Sayre's, which will prevent dislocation, give extension, and allow the patient to walk daily.

[One week later.] The abscess in this case has already refilled, and is now just as it was at first. The thickness of the pus and lack of connection with the joint, it will be remembered, led me to think the abscess outside the joint. Aspiration being of no avail, I shall proceed to lay open the swelling. Having done so, I find a mass of lymph and thick pus, but no opening into the joint. Searching more closely, however, I now discover a small chink leading directly into the joint. Otherwise there is no opening. I shall now wash out with carbolic acid and water, and put the leg on a splint. If inflammation goes on and caries develops we shall probably excise the joint. There is no dislocation,

and but a slight stretching of the ligaments; there is no denuded bone and I hope for improvement.

Chronic Mammary Abscess. — Our next patient, whom you have seen in the wards, has a chronic mammary abscess. She has made no improvement, and has therefore been brought in for treatment. Two months ago she was confined with her first child. Within six weeks she had the so-called "broken breast," and has been three weeks in the hospital. At present the question is, What is the speediest method of arresting the suppuration and healing the abscesses? The trouble is in the right breast, which, you will notice, is not much larger than the other, for it is going through the process of shrinking. It still has milk. In the left breast are the marks of leech bites and the cicatrix of a small abscess, now healed. In the right the abscess has existed for six weeks. Ordinarily the simplest form of abscess arises under the skin near the nipple; another variety forms deep in the breast between the lobes of the gland; and a third, beneath the breast, creates a sac, upon which the former floats. The difficulty here is that although milk is still secreted, pus continues to burrow in various directions. A free incision should at once be made. How do we make this incision? If necessary to incise near the nipple, we cut parallel with the milk ducts, which run into the nipple precisely as the spokes of a wheel enter the hub. If we cut the ducts, or if the abscess break into them, we have a lacteal fistula, and milk and pus mingle in the same discharge. Here only pus flows from the abscess. Incisions have already been made, but the burrowing of the pus still continued. We then tried compression by strapping, leaving openings opposite the sinuses, but, with the exception of the shrinkage of the breast, this treatment effected nothing. Two days ago the director went a long distance into sinuses, which to-day the patient has given us permission to open. Sometimes I should use the seton, because it seems to wake up healthy inflammation in the sinus into which it is introduced. When this change has occurred we withdraw the seton, and the sides of the sinus come together, granulate, and heal. This is a very obstinate case. I take the director, and here find a skin sinus, which does not require a seton but the knife. Here, just under the skin, I find a collection of pus, — here another sinus going down deep into the gland, and here still another skin sinus, — altogether quite a variety of openings and sinuses, namely, three under the skin, one going to the base of the gland, and one which has been opened and has healed. At present I do not think it advisable to use the seton unless I should make some new discovery. Certain of these openings may communicate with others; some of them run deeply and do not seem to come out again. Consequently, I think it wise to slit up the skin sinuses and widen the mouths of the deeper ones, and afterward strap again. When the patient came into the hospital she had a dark,

cutaneous eruption, which suggested a specific origin, and, although we can get no history of syphilis, I propose to give her the following:—

R $\bar{y}$	Hydrarg. bichlor.	gr. i.
	T. ferri muriatis	3 i.
	Aquæ destil.	3 iij. M.

One teaspoonful three times a day.

This forms a combination of specific and tonic, and will do her good.

I have now opened a suppurating tract, which is covered by a false mucous membrane, and is secreting pus. The incision, together with exposure to air and application of pressure will probably change its character and cause it to heal.

Here is a milk duct which has been perforated by the abscess, and through this opening milk exudes. So that we have not only a sinus, but a milk fistula as well. Slitting up the skin sinuses of course does not interfere with the future usefulness of the gland. From the deepest sinus of all comes the exuding milk. I propose to enlarge the opening by means of the sinus dilator. In tissues of this kind dilatation is preferable to cutting. I find that this sinus goes beneath the breast to the pectoral muscles. Probing now the other deep sinus, I make the discovery that at the bottom these two sinuses are very near together. I make them one, and pass in a seton, which I finally conclude will here be most useful. This is a very instructive case, because it is like those we meet in private practice, and which last so long that they sometimes lead the patient to fear that cancer is the real source of trouble. We shall poultice this breast for a few days, and let it discharge through the sinus we have left. At the end of a fortnight we shall find that a great change has taken place.

Solid Tumor under the Pectoralis.—It has always struck me as being a very curious thing that cases of similar nature often come to us in groups. This is frequently the experience in private practice. For example, you will recall the case of the other day in which there was a swelling beneath the left breast and in the axilla that proved to be a suppuration. That patient is nearly well. Here, now, is another similar case. The condition of the breast indicates that there never has been any trouble in the gland. Meanwhile, under the pectoral muscles and in the axilla is a condition identical with that found in the case of a fortnight ago, namely, enlargement of veins, high pulse, swelling, etc. What is odd here is that the swelling has come and gone for nine months, while the other case has a history of a few days only. During the last two weeks the patient has had cough and headache, but no marked chills. On the 15th the temperature was 101° A. M., 103° P. M.; 16th, nearly normal; 17th, 101°; and so it has varied, accompanied by fever, which has now disappeared. The history, then, is that of constantly alternating processes. The swelling is more lobulated than that

in the other case, and although it is probably composed of enlarged lymphatics and an abscess, it may be something else. In fact, now that the patient is under ether, and I can freely handle the enlargement, I find it feels more like a solid tumor than it did before I was able to examine it as I now can. I did propose aspiration, but the tumor being a hard mass I of course abandon that form of treatment. What should be done is enucleation of the tumor, but having until now had no time to complete my examination of the growth, I could neither inform the patient of the necessity of an operation, nor secure her permission to perform it. There is nothing to do, then, but reserve the case for another day.

[Three days later, under ether, a free crucial incision was made in the axilla, the pectoralis lifted, and a large lobulated mass of lymphatic glands excised. The operation was done under antiseptic spray.]

Syphilitic Constriction of Pharynx.—This patient is an extremely interesting one. He was brought into the hospital three weeks ago with such an extraordinary syphilitic constriction of the throat as to be barely able to swallow or breathe. At his request I at once performed tracheotomy, which has relieved his respiration. When not under ether, he breathes very comfortably. The case is similar to one shown you last week, except that the other had not gone so far as this has. To-day I propose to dilate the constriction, which is so extreme that the tip of my forefinger will not pass up to the posterior nares, while the opening into the throat will not admit the end of my little finger. The strictures are very firm both above and below, and the pharynx has lost its mobility. I first try a conical urethral bougie, which passes to a certain distance, then bends; substituting another loaded with lead, I find it goes through the stricture and into the œsophagus. I now take larger, rectal bougies, and now my finger, dilating as much as I deem prudent.

[One week later.] The constriction has improved to such a degree that the forefinger now passes easily up into the posterior nares. The opening downward, which would not admit more than the little finger's tip, now receives the end of my forefinger. The wall of the constriction, both above and below, seems to have become lessened by absorption, and the patient eats and drinks with more ease. He was rendered so uncomfortable by the ether administered last week that to-day I shall dilate without anæsthetic. Beginning as before with the conical bougie, I next take the rectal bougie, and finally my forefinger, which I succeed in passing quite beyond the stricture, which appears to be a firm zone about two inches in depth. Systematic dilatation will undoubtedly do much to relieve the patient. He still wears a tracheal tube, the first one having been replaced by a second, which is gold-plated and very comfortable.

OBSERVATIONS ON THE MECHANICAL TREATMENT OF
DISEASE OF THE HIP-JOINT.

BY CHARLES FAYETTE TAYLOR, M. D., NEW YORK.

IN my intercourse with medical men I am so impressed with the amount of misconception of the means used and the paramount object aimed at by the advocates of mechanical treatment for disease of the hip-joint, that I desire briefly to set forth my own views in regard to some of the ideas and the more important methods which considerable experience has seemed to establish as controlling in such cases.

The subject may be introduced in the form of the following propositions, namely: First. All organs while in a state of disease require rest from the performance of their functions in the direct ratio of the amount, quality, and intensity of the abnormal movements. Second. What is rest for an organ in one condition is not necessarily rest for it in another condition; that is to say, an organ, in a certain degree of *progressive* inflammation, presents conditions essentially different from the same organ in the same relative degree of inflammation in the *retrogressive* stage.

The so-called "mechanical" treatment of hip-joint disease, so far as I understand it, is simply the *working out* to practical conclusions of responses to indications to which the above propositions give the key-notes. The difficulty with the non-specialist in these cases is that he is apt to give altogether too much importance to appliances and too little to the varying states of the disease. While he is contemplating different kinds of "splints" the disease is carrying off his patient. If he would seek only for the exact indications, the best means for responding to them would be likely to suggest themselves, and he would be surprised to find how simple and easy it would be to effect his object. The mechanical treatment of hip-joint disease is not a question of splints, — nearly everything can be accomplished by cheap and home-made appliances, once the condition is clear in the mind, — but one of different conceptions of symptoms. The particular means of answering the indications must follow the conception. They do not, or at least they ought not, to precede it.

Now, heeding the logic of hip disease, we attempt first to ascertain and then to answer all the indications. The first is to give rest to the diseased joint. The plaster-of-Paris and other dressings, sand-bags, and similar means give rest only in part, and the lesser part at that. This is our conception of the case. For rest from motion is relief from only the minor labor of a diseased hip-joint in the acuter stage. The pressure from irritated muscles at this time is a much greater evil than motion alone could be. To overcome the injurious pressure from irritated muscles is, then, imperative. Hence, we must stretch them, and we find that practically a splint is more efficient than any

other means, because by a splint we can secure the more definite and concentrated effect of counter-extension, and a splint also enables us to enforce a better hygiene. There seems to be a general quandary in regard to the amount of extension which ought to be employed. There never was a question more easy to answer. We must carry extension until the muscles relax, and then we must maintain the extension until they lose their irritability and the inflammation in the joint has been given time to become retrogressive. This process will require, on an average, from three months to eight or twelve, depending on circumstances. But there are indications for extension so long as the muscles are rigid, and until there is evidence of material subsidence of the inflammatory action. Then, with the setting up of the reparative process, there should be motion in the joint in order that the reparation shall be accomplished under the stimulus of motion. For, when the retrogressive process has advanced to a certain stage, immobility, which in the acuter stage secured one kind of rest to the joint, becomes with the altered condition of that organ a burden or a labor, tending first to retard and then seriously to modify the nature of the reparative process going on in the joint. Long before the articular surfaces can bear pressure without injury they require the stimulus of motion for the perfection of the reparation going on within them. Immobility at this stage stimulates plastic exudation and union between the joint surfaces, while motion determines the formation of reparative tissue similar to and to answer the purposes of that which was injured or destroyed. If immobility of a healthy joint causes plastic exudation and ankylosis, of which there are many examples, then much more ought we to expect, when a previously diseased joint is motionless, that adhesions of the joint surfaces would take place. And this, in my experience, is actually the case. In other words, if immobility of a healthy joint causes a morbid process to be set up, we ought to expect that such a process would be set up in opposition to the reparative process when a corresponding stage is reached in recovering.

Thus we see that "extension" can cover, as a means of treatment, but a certain portion of the time through which an inflammation of the hip-joint must pass in its several stages. There are positive indications for extension, but there are as positive limitations to its use. The limitation is reached at the point of time when the muscles have become soft and compressible, and the interstitial movements have become completely retrogressive. From this moment reflex irritation of the muscles ceases entirely, and with it the necessity for extension. Motion, also, which might do injury — was sure to do injury if there had been the least pressure in the joint — at a previous stage, becomes now a necessity to a perfect articular hygiene. So that the indications become completely changed, and the methods which had been efficient up to

this time must be abandoned in consequence of the very success of their use. After this the joint needs a different kind of protection, till the completeness of the reparation makes protection unnecessary. Thus the splints or instruments are determined for us. After this stage they must be contrived so as to promote joint motion, not to prevent it. The mechanical means must suit the actual conditions present, and must lead logically to the end sought by treatment. They must vary in different stages of the same case, and even more in different cases. It is absurd to speak of "an instrument for hip disease." There can be no one complete instrument for hip disease. There can only be instruments calculated to answer the indications present at some stage of hip disease. The surgeon who treats disease of the hip-joint by a method calculated to fulfill but a single indication, whether by gypsum or other bandages, sand-bags, splints, or what not, fails, in my opinion, in his conceptions of the elements of the case, as he surely will fail of securing the best attainable result. Two or three cases will illustrate the pertinency of the foregoing observations. The first is a typical and comprehensive one.

S. F. McD., four years old, was first brought to me in July, 1876, in consequence of a slight halt in his right leg. Some weeks before he had twisted it by falling out of a rocking-chair; this was followed immediately by severe pain, lasting four days and nights. During this time the limb was flexed. The pain was of a spasmodic character, occurring very frequently. But he soon got over the injury, as was thought, and when, later, a limping was noticed, it was not connected with the accident. There was but the slightest difference in the motions of the two hip-joints when he walked, and no pain at this time, nocturnal or other. Yet it was certain that the joint was affected, and I gave an opinion accordingly. The child had been treated for rheumatism. My advice that he be put under treatment for disease of the hip-joint was not acted on. In October the child was again brought to me, this time complaining of pain, especially at night, and limping, not badly, but decidedly. The case was evidently rapidly approaching the suppurative stage, and I said so to the father. Not being ready to believe that the case was so bad, he still declined to act on my opinion. He returned on the 10th of January, 1877. At that time the joint was suppurating rapidly, there was great constitutional disturbance, the thigh was strongly flexed on the pelvis, motion was excruciatingly painful, and the affected hip was greatly enlarged. Treatment was commenced on the day last mentioned. It consisted in the use of the counter-extension splint, and the patient, as is usual during the first month of treatment, was kept in bed. The recumbent position, during the first few days or even weeks of treatment, relieves nervous depression, gives time for the patient to accommodate himself to the novel sit-

uation, enables us to save the amount of his weight from the perineal straps, and by that amount increase extension and hasten the effects of treatment. The child had a thin, tender skin, and the perineal straps causing some excoriation, a weight and pulley were added. The cord was attached by means of a hook directly to the lower end of the splint. The splint, as shown by the dynamometer, exerted a force equal to an average of eight pounds. To this five pounds were added by means of the weight and pulley, so that it required about thirteen pounds' weight to overcome the muscular resistance. The object was, as it always is in such cases, to carry extension to a point sufficient to cause complete relaxation of the muscles. And here I may say that care should be taken always to keep a surplus of force opposed to the irritable muscles. The suppuration not subsiding, and the abscess approaching within reach, it was opened on the 30th of the same month by a free incision. Lint was inserted to keep the parts from uniting, and thus to give free drainage to the fluid, which discharged copiously one or two months. At this time the patient came under the observation of Dr. E. H. Bradford, of Boston, who kindly assisted me in attending him during a couple of months. In February and March he suffered a good deal, and the full amount of extension had to be kept up. Another abscess developed further on the outer aspect of the thigh, which was evacuated so soon as it was discovered. In fact, several openings formed, the inflammation seeming to be rapid and destructive. About the first of April, or, say, three months after the beginning of treatment, the pain had subsided, the sinuses discharging freely, and no new ones appearing, he was allowed to begin to walk, the joint protected, of course, by the splint which he wore, and which kept up continuous extension in whatever position he might place himself, whether standing or lying. From this time onward there was uninterrupted progress of the joint reparation, marked by several epochs of interest to the student of this disease. Our notes say: "May 9th. Excellent health; tolerable mobility of joint; thigh in good position. Pus discharging from two openings on the outer aspect of the thigh, but apparently more from a slough which had occurred there than from a deep-seated source. Thigh still considerably swollen, and hard in upper portion.

"August 1st. Slight discharge from two openings. No pain nor tenderness. Easy mobility at hip to a moderate extent. Excellent health.

"December 28th. Patient ready for second instrument several weeks ago, but there being considerable adduction and a tendency thereto, the ordinary second or 'jointed supporting splint' was modified so as to take the weight of the body on the *opposite side* of the pelvis. By this arrangement the thigh was abducted with each step, while protecting the joint most perfectly, and at the same time allowing freedom of motion in the hip and all the joints of the affected limb. Abscess still

discharging moderately. Mobility free but to a limited extent, especially laterally. Health perfect.

"March 30, 1878. Abscesses have been closed during the past two months. Good and easy mobility at hip in every direction, including rotation. Child very active and nimble.

"December, 1878. Every motion perfect. Patient has been receiving a portion of his weight on the affected hip during the past two or three months without the least harm. He is discharged cured. He does not limp. There is a slight difference in the lengths of the lower extremities, but not enough to be noticeable in his locomotion. He is directed to return frequently during the next two years, for examination."

The comments on the above case need not be extended. I would simply call attention to the serious nature and rapid progress of the disease prior to the commencement of the treatment; to the suppuration and evident destruction of some portions of the articulating surfaces; to the two months during which his system was recovering from the shock it had received, before retrogressive action was fairly established; to the progress after that; to the relatively small amount of motion during the first portion of the period of recovery, and the probability that ankylosis would have been inevitable with any plan of treatment which did not involve provision for motion at, with protection to, the hip-joint as a part of the articular hygiene necessary to the most complete reparation. I would especially direct attention to the probability that the drying up of the abscesses was very much accelerated by the action of the muscles contiguous to the affected parts, whether soft or bony; and, lastly, it would seem not too much to say that whether the hip-joint can recover with motion intact after ulceration ought no longer to be questioned. That this joint was suppurating there cannot be any doubt.

Without entering more minutely into the details of mechanical treatment, I will give one or two cases bearing on the insufficiency of position, either with or without extension, to secure the best attainable results.

M. K., girl, seven years old, was first seen on the 8th of March, 1876. Her history is as follows: About nineteen months before, the child gave signs of disease in the right hip-joint, and the diagnosis being made she was confined to the bed, and treatment by means of the weight and pulley was instituted. Everything seems to have been done which was possible with the inadequate means employed. There was no pain from the beginning, nor during any part of the time she was under treatment. Her general health seemed to be perfect. Yet, after a certain amount of improvement, as indicated by diminished flexion and some increase of mobility at the joint, there seemed to be no further progress. After fifteen months there was still imper-

fect mobility, some slight shrinking on attempting motion; a little limping when using the affected limb. The increasing softness of the soft tissues and other constitutional evidences indicated that the limit of confinement without general deterioration of nutrition, as a result of imperfect hygiene, had been reached. What was to be done? To remain indefinitely in bed is impossible. Hence the turning out of so many patients to relapse, and the importance of methods which render one independent of time. Notwithstanding the previous extension, the muscular tonicity, being more than normal, indicated the necessity for relaxation. This was done by means of the counter-extension splint during two weeks, *and till the muscles were completely relaxed*, when the jointed supporting splint was substituted and the child set upon her feet. From this time there was uniform amelioration in the condition of the muscles and of the joint till after ten months, during which time she had every consistent liberty of motion and locomotion, including fresh air and exercise, the splint was removed and the patient discharged perfectly restored. It is now two years since that event: the child has been going about like other children; there is perfect motion at the affected joint, and no discoverable difference between the functions of the two limbs. Both trochanters are on the same level.

In regard to the permanency of the cures effected by mechanical means, the following case may be interesting:—

R. A. C., a lad five years old, began to lose his appetite and to show signs of decline in the fall of 1866, accompanied with limping on the right limb, nocturnal pains, wakefulness, etc. In May following, he became unable to walk, at which time he came into my hands. The treatment continued during about ten months, when he was discharged cured. Within a few weeks I have had the privilege of examining this case, now a healthy young man of seventeen, in active business, requiring him to be constantly on his feet, and I had to ask him which had been the affected limb. Examining him carefully,—I may say mathematically, for patients are always examined on a paper marked with lines and cross-lines, so that nothing is guessed at,—I found the trochanter of the previously affected side to be five eighths of an inch higher than the other, but the motions of the joint were perfect, and he has never had any evidence of disease or one moment of lameness in that joint since his discharge.

The recumbent position may be assumed for a limited period with decided advantage, especially in the beginning of the treatment. The weight and pulley, as a means of extension, answer very well in an exigency, or as a means of increasing the amount of extension, or of diminishing the pressure of the perineal straps in certain cases which seem to be especially intolerant of it. But the weight and pulley, as a method of treatment, are incapable of producing that positive local effect

on the muscles about the hip-joint which is especially characteristic of counter-extension. A given weight attached to the limb simply drags the whole person downwards, exerting, to be sure, a certain amount of force against the hip-joint muscles, but not affecting them in the same positive and purely local manner that counter-extension does. But recumbency, while serviceable in exigencies and as a contingent aid, interferes too much with the general hygiene of the patient to be depended on as a complete means of treatment. Whatever the immediate benefit which may be experienced in the earlier months of the confinement, the deprivation of fresh air, exercise, and the impairment of the digestive and assimilative functions, begin to interfere with the patient's progress towards recovery long before there has been time for reparation even under more favorable conditions; so that, being aware of and admitting the evils of prolonged confinement, surgeons are continually letting their patients up too soon. With the mitigation or cessation of painfulness they are set upon their feet again. Hence, relapses are frequent, and perfect recoveries — recoveries with motion and without lameness — are very rare indeed.

Perhaps the following statistics may be of interest and not without value in this connection: —

Leaving out of consideration all cases whose histories, subsequently to their treatment, are unknown or in doubt, I find that there remain ninety-four private cases of hip-joint disease which were under personal observation and continuous treatment from the time they applied until they died or were cured, and whose present condition is now, or was very recently, a matter of personal knowledge, for no case whose ultimate fate is not positively known deserves a moment's consideration in any estimate of the probable value of treatment for the hip-joint. Of the ninety-four cases three died, — two of the disease, and one was run over and killed. Among them there were twenty-four with suppurating joints and discharging abscesses, — nearly all in that condition when first applying. Of these twenty-four with abscesses, two died, — the same as stated above, — and in five the discharge has not yet ceased. Deducting these seven, there remain seventeen fully recovered, or seventy per cent. of the suppurating cases. Three of the seventeen recovered cases have ankylosis, and fourteen recovered with practicable joints, — the majority with ample, and some with perfect motion. The ratio of motion to ankylosis, in the cases recovering after suppuration, more or less extensive, is as eighty-two to eighteen. In two of the cases still discharging ankylosis is progressing favorably, and in three there is excellent motion, and, except for the slight discharge remaining, they would be among our best cases. The joint motions are nearly perfect, and the joints themselves are apparently well, the present discharge being supported, undoubtedly, as it so often is, by eccentric

periosteal excoriations. In such cases nothing so tends towards recovery as the action of the muscles contiguous to such eccentric implantations.

The above enumeration includes all cases of the class previously specified for the nine years preceding November, 1877, but excludes the cases received since that date.

RECENT PROGRESS IN THE TREATMENT OF THORACIC DISEASES.

BY F. I. KNIGHT, M. D.

Bloody Fluid in the Right Pleura; Paracentesis; Recovery. — Dr. Broadbent read notes of a case of unusually rapid effusion of bloody fluid into the right pleura, in a gentleman aged seventy-six,¹ who recovered after paracentesis. The patient consulted Dr. Broadbent on the 16th of May, suffering from dyspnœa on exertion, which had been gradually increasing for ten days. There was evidence of right pleural effusion; dullness to nipple-level in front and mid-scapular region behind. The next day the dyspnœa had increased, and now there was dullness all over the right chest, except a small area below the clavicle. Respiratory murmur was absent, and there was tubular breathing between the scapula and the spine. On the 18th, the right pleura was obviously full of fluid, and it seemed that paracentesis was absolutely necessary. Accordingly, on the next day, two quarts of highly blood-tinged fluid were withdrawn by means of the bottle aspirator, a small canula being used, and only gentle suction employed. A considerable quantity was left behind, but it was thought prudent to stop. The heart, which had been displaced to the left, regained its normal position. The fluid was highly charged with blood, and the probability of the effusion depending on malignant disease was entertained. The next day the temperature was 102° F.; the fluid did not again increase, but gradually became absorbed. The patient left town at the end of June. Dr. Broadbent remarked on the advanced age at which the effusion had occurred. He had always considered advanced age as a reason for early tapping, owing to the slowness of absorption and loss of elasticity of the costal and pulmonary structures, as well as the need to preserve the patient's strength. Another point was the rapidity of the effusion, which was unparalleled in his experience. This, added to the amount of blood it contained, all seemed in favor of malignant disease. There was still some impaired mobility of the right side of the thorax, and evidence of bronchial dilatation. The amount of blood present was explained in part by the rapidity of the effusion. Mr. Maunder, in the

¹ Report of a meeting of the Clinical Society of London, *Lancet*, March 30, 1878.

discussion which followed the reading of the case, said that the only explanation offered of the origin of the blood was the possible presence of malignant disease. Probably this was not the cause, the patient being in good health, and twelve months having elapsed since the operation. He suggested that it might be accounted for as the result of congestion and oozing, from want of tone in an elderly person, and analogous to the accumulations of blood sometimes met with in the bladders of old men, and from which they often recover.

Pleuritic Effusion; Sudden Death without Paracentesis. — Dr. Broadbent also read the notes of this case at the meeting mentioned above. The patient was a young man, twenty-four years of age, with a phthisical family history, who was attacked with pleurisy in the right side at the end of August. For two weeks he suffered from shortness of breath. On September 28th he was seen by Dr. Broadbent; there was evidence of much effusion, and the heart was displaced. There was no paroxysm of dyspnœa, but it was decided to perform paracentesis the next day. The patient passed a good night, but was attacked by dyspnœa at six A. M., and shortly afterwards died. It must be noticed that there was not a single paroxysm of dyspnœa before the final attack. No post mortem was obtained, but the cause of death was probably thrombosis in the veins of the right lung extending to the heart. Dr. Whipham mentioned a similar case which occurred in St. George's Hospital two years ago. The patient was under the care of Dr. Barnes for ulceration of the os uteri, and had been in the hospital for a month. Ten days before her death she had a slight shivering, but nothing pointed to the pleuritic effusion until two hours before her death, when she was attacked with dyspnœa. Dr. Whipham was able to ascertain the presence of effusion into the left pleura, which was confirmed after death. No thrombi were found. [The amount of effusion is not stated.] Other cases of sudden death in patients with pleural effusion were alluded to by different gentlemen, but no particulars were given. [It is to be noted that sudden death in Dr. Broadbent's case occurred with an effusion in the *right* pleura. If we are not mistaken the effusion has been in the left in a large majority of such cases reported. Trousseau explained them as due to the dislocation of the heart, and the consequent torsion of the vessels, especially the aorta, inasmuch as it might easily happen that the circulation should be entirely cut off by a sudden movement of the body, violent cough, etc. Bartels¹ considers this explanation very improbable; he does not believe that the aorta could be so twisted by displacement of the heart that it would not be kept pervious by the force of the blood. Bartels thinks that fainting and occasional sudden death can be better explained by a compression and interruption of the circulation in the large venous

¹ Deutsches Archiv für klin. Med., iv. p. 265.

trunk; especially might the vena cava ascendens, as it passes through the diaphragm, when it is firmly adherent to the edges of the foramen quadrilaterum, suffer an almost right-angled twisting.]

Dyspnœa not an Habitual Symptom of Pleurisy with Effusion. — Dr. Dieulafoy¹ says it is generally believed that dyspnœa is one of the most common symptoms observed in pleurisy with effusion; and certainly, at first sight, it seems quite natural, when two litres of liquid exist in the chest, when the lung is flattened and thrust back by the effusion, and when hæmatisis is only imperfect, that the breathing should be oppressed. Yet such oppression does not exist, or only to an insignificant extent. Effusion, when it amounts to a very large quantity, impedes respiration but slightly, so that *dyspnœa is not to be regarded as an habitual symptom of pleurisy with effusion.* This is a point of great practical interest in relation to the indications for thoracentesis.

At the commencement of a pleurisy, when the pain in the side is so acute, the patient may have short, interrupted, and jerking respiration, and he is said to have dyspnœa. His breathing is indeed difficult, but it is difficult and impeded only because it is painful, effusion having nothing to do with it, as it does not yet exist. The breathing becomes easier in proportion as the pain disappears, although the effusion is making incessant progress, and it is often when the effusion has reached its apogee, attaining two or three litres, that the patient believes himself cured, because he is then free of fever and of pain. During the acute stage of pleurisy, also, febrile action accelerates the respiration; for whatever may be the cause of fever, it renders combustion active, and consequently accelerates the respiratory rhythm. But fever is in general very moderate in pleurisy, and exerts but a slight effect on the respiration. Nevertheless, both pain and fever are two of the elements of pleurisy which, by a different mechanism, may engender disturbance of the respiration; but when these two elements have disappeared, or have not existed (as in certain subacute pleurisies termed latent), the patient has no dyspnœa, notwithstanding the large accumulation in his pleura. He certainly is not able to make the same exertions as a man in good health, but when he is in bed, and in the repose which any patient must be in to undergo a medical examination, the dyspnœa is so insignificant that it ought not to be regarded as an element of diagnosis, and should not be accepted as an indication in regard to paracentesis.

This association between a large effusion and an almost normal respiration, which at first seems so strange, is not difficult of explanation. In the physiological condition respiration is not exerted alike over the whole pulmonary surface, certain parts of the lung, especially the supe-

¹ Gazette hebdom., September 27th; Medical Times and Gazette, October 12, 1878.

rior lobes, contributing but very little to the function. But in a pathological condition, when the play of the lung is impeded by the presence of an effusion, the healthy lung comes into action through its whole extent, and nearly reëstablishes the equilibrium in the phenomenon of hæmatisis.

The first consequence which results from this absence of dyspnœa in pleuritic effusion is that dyspnœa furnishes only insufficient or unsafe indications when an operation has to be decided upon. To delay evacuating the pleura until the patient is attacked by dyspnœa is to wait until the effusion has attained proportions so considerable that the life of the patient has already been long in danger by the time the decision is arrived at. All the cases in which sudden or rapid death has occurred during the course of a pleurisy with effusion are neither known nor published, but those which have been published show us that the patients generally die on account of cardiac coagula, coagula of the pulmonary arteries, and thrombosis favored by the entirely mechanical conditions of displacement, torsion, and flattening of vessels, and of the obstructed circulation due to the effusion. Another consequence arising from this absence of dyspnœa is that when it is present in pleurisy it is a sign of complication; so that whenever a patient, the subject of pleurisy with effusion, presents more than from twenty-eight to thirty respirations per minute, we know that we have something besides a pleurisy to deal with. If careful examination be made, it will be found that the pleurisy is secondary, developed in the course of Bright's disease, or of a cardiac affection with congestion of the lung; or the pleurisy is associated with other diseases, as double pleurisy, bronchitis, pneumonia, pericarditis, fluxion of the chest, or pulmonary congestion.

To sum up: (1.) Dyspnœa is not one of the habitual symptoms of pleurisy with effusion. Pleural effusions, even when they reach eighteen hundred grammes or two litres, only accelerate the respiratory rhythm by four or five respirations per minute. I am not speaking, be it well understood, of the painful period which is often accompanied by false dyspnœa, and I make reserves in the cases in which fever is still vivid. But under all other circumstances, in the apyretic phase of pleurisy, and in subacute, latent, and chronic pleurisy, dyspnœa is a symptom so anodin that it does not merit being taken into consideration in reference to diagnosis, prognosis, or treatment. (2.) On the other hand, when a true dyspnœa is proved to exist during the course of a pleurisy, we must always be on our guard against a complication, whether the pleurisy be secondary (as in Bright's disease or affection of the heart), or whether it be associated with other phlegmasiæ or pulmonary congestion.

Auscultation of the Arteries. — Matterstock,¹ who was excited to the

¹ *Deutsches Archiv für klinische Medicin*, November 29, 1878.

study by the work of Weil, gives the following as a summary of his observations : —

(1.) In mitral disease there exists in the majority of cases a diastolic murmur, that is, with arterial *expansion*, in the carotid and subclavian arteries, usually of a soft, blowing character. This may be due to an irregular movement of the blood in consequence of diminished filling of the artery, or may be produced in the neighboring distended vein by the intermittent pressure of arterial expansion.

(2.) The systolic murmur heard in the pulmonary area in various diseases (pulmonary stenosis, mitral affections, pulmonary emphysema and cirrhosis, anæmia, etc.) is often propagated with striking intensity into the left subclavian, and even into the axillary artery. The same is true of the pulmonic second tone.

In like manner, the auscultatory phenomena of the aortic orifice stand in intimate relation to the arteries of the right side.

(3.) A murmur may be produced simply by pressure [of the stethoscope] in all accessible arteries under the most different conditions; this has no semeiotic significance.

(4.) A *tone* also may be produced artificially by pressure [of the stethoscope] in all the large compressible arteries into which a small quantity of blood is thrown by quick ventricular contraction.

(5.) This pressure tone is due to the vibrations both of the arterial wall and the fluid.

(6.) The double murmur is also artificial [that is, produced by pressure]. Its occurrence is associated with no particular valvular affection. All that is necessary for its production is a moderately large quantity of blood thrown into the arterial system, not too slowly, and that the arterial wall shall have retained its contractility, or at least shall not have lost very much of it. The most necessary condition for its production is suitable pressure.

(7.) In most cases the second half of the double murmur is due to centripetal movement of the blood. In rarer cases it may correspond to anadierotism of the pulse; then it is probably due to a double contraction of the heart, and is nothing more than a reduplicated tone transformed into a murmur by pressure.

(8.) The reduplicated diastolic arterial tone is for the most part produced by a double contraction of the ventricle. It has no pathognomonic significance.

(9.) The double tone may be found in all possible conditions, and is, at least in most cases, to be considered merely as a consequence of the katadierotism of the pulse.

(10.) Cases of considerable aortic stenosis are distinguished above all other valvular affections by a want of the double murmur and pressure tone.

(11.) The arteries of those poisoned by lead, even in very early stages of the disease, may show all auscultatory phenomena of the arteries of patients with aortic regurgitation.

(12.) The arteries give no pathognomonic sign of aortic insufficiency.
(To be concluded.)

RECORDS OF THE BOSTON SOCIETY OF MEDICAL SCIENCES FROM MARCH TO MAY, 1878.

JAMES J. PUTNAM, M. D., SECRETARY.

TUESDAY, MARCH 24, 1878. — DR. WEBBER read an account of a case of *section of the ulnar nerve* just below the point where the branch supplying the abductor minimi digiti is given off. As a result of this injury it happened that when an attempt was made to extend the fingers they all, except the little finger, assumed the position characteristic of the "bird's-claw" hand, and further, the first and second fingers remained parallel with each other, as usual. The little finger on the other hand was drawn, by the unbalanced action of the abductor, into a position nearly at right angles with the hand, while the ring finger stood half-way between the second and little fingers. The loss of electrical reaction affected the parts supplied by the injured portion of the nerve, but so far as could be told with so young a subject (a boy seven years of age) no part of the skin had lost its sensibility.

DR. AMORY asked as to the length of time required for recovery of a nerve from section, and said that after accidental division of one of his own digital nerves three years had elapsed before sensibility had become entirely restored.

In answer to Drs. Dwight and Bowditch, DR. WEBBER said that undoubtedly the assumption of the functions of injured nerves by others, which either anastomose with them or supply the same area of skin, was in part the cause of the persistence or quick return of sensibility to paralyzed parts of the skin, but besides these causes the education of the cerebral centres to appreciate slight impressions conveyed mechanically to neighboring nerves must be taken into account.

DR. BLAKE showed an object which had been found in the eye socket of a Peruvian mummy by an officer of the United States Coast Survey, and given to him. It was of yellowish color, flat on one side and sharply rounded on the other, and was believed, in accordance with the opinion of Professor Agassiz, given in regard to other similar specimens, to be a portion of the eye of the cuttle-fish. It was not a unique but yet a very rare specimen. It had undoubtedly been introduced at the time of embalment, but Dr. Blake had been unable to learn whether it is only in skulls of a certain type, of which two distinct kinds exist, that these bodies are found. The rounded side is always turned outwards. It is not possible that they are introduced before death, because the specimen at the Peabody Museum is so large that it must have been forced in with some difficulty.

DR. WADSWORTH showed a microscopic section of an *epithelioma of the limbus corneæ*, which had encroached slightly on the cornea, forming a rounded

tumor, perhaps a quarter of an inch in circumference. The surface, during life, had been smooth and unbroken; its central portion rather pale, the rest congested. The case was interesting as indicating the possibility of curing the disease by operation, more than nine months having now elapsed since the removal, without recurrence; also because it was possible, under the microscope, to trace the diseased into the healthy tissue in both directions. He showed also a section of another small *epithelioma of the eyelid* (not involving its edge), with the history that more than a year before the operation for removal a minute tumor had been noticed which had seemed to be an enlarged sebaceous gland, with inspissated contents, forming a mass perhaps a line in diameter, and consisting (under the microscope) of granules and fatty matter. For two or three months there had been no further trouble; then attention began to be frequently called to the part by a feeling of slight pain or itching there, and in the course of a year this little tumor had developed so as to be three eighths of an inch in diameter and rather dense to the feel, and the surface uneven and nodulated. The microscope had revealed the usual appearances of epithelioma. Two and one half years had elapsed since the operation, without any sign of return.

DR. DWIGHT wished to put on record a case of *partial transposition of the viscera*, every part being in its normal place except the intestines. The ascending colon was on the left side and the sigmoid flexure on the right. Partial transpositions of this kind are very rare, while complete ones are not excessively so.

TUESDAY, APRIL 16, 1878. DR. GARLAND described some *peculiar movements* which he had recently observed in the *pus cells of a specimen of urine* which had been sent him for examination. The urine was of a pale straw color, showed an acid reaction, and had a specific gravity of 1011; it contained a large amount of albumen, and an abundant sediment which consisted of pus and blood cells, and epithelium from the vagina, lower urinary tract, and renal pelvis. There were no casts, but a large number of bacteria were moving about the field. The pus cells were making sluggish amoeboid movements, and displaying numerous amoeboid changes of contour. Some of the cells seemed enlarged by a protrusion on one side. This protruded portion was ordinarily clear and hyaline in appearance, but sometimes contained a few isolated granules, while the remainder of granular contents was grouped about the nuclei in the other parts of the cell. Strong illumination (by gas) of the hyaline portion made it evident that the granules which it contained were in active vibration. In spite of being violently agitated, however, the granules did not migrate from their positions. The addition of acetic acid and the beginning of alkaline fermentation stopped the movements. No similar movements could be detected in the granular masses which remained grouped about the nuclei in the other parts of the cell, and it was confined to two or three of the individual granules in the clear part. By the aid of careful focusing Dr. Garland was able to convince himself that the moving particles were inside the cell, and that they were not bacteria, from which they differ in being much smaller and in showing much more active movements than the latter bodies.

DR. DWIGHT suggested that the movements described were probably the same as the Brunonian movements of protoplasm.

DR. GARLAND thought this explanation a very probable one, but said it was unusual to observe such movements in the pus of urine, and suggested that they might have a clinical significance. Dr. Garland said further that in order to see the movements described it had been necessary to have a strong illumination and an acid urine.

TUESDAY, MAY 21, 1878. DR. WADSWORTH showed some photographs of sections of the retina in the foveal region.

DR. BOWDITCH showed a *modification of Du Bois Raymond's unpolarisable electrode*, of his own invention and construction. It was made of a plate of hard rubber about three inches long, one inch wide, and one quarter of an inch thick. Along the upper surface of this plate, near the median line, a number of small holes or pits had been bored, about one quarter of an inch apart, from one end of the rubber strip to the other. Each one of these pits communicated by a little tunnel, one eighth of an inch or so in length, with a narrow trough which occupied the rest of the width of the strip of hard rubber from the pits outward, separated, however, from the pits themselves, on the surface, by the narrow bridge of rubber which closed in the tunnel from above. The pits were designed to hold the solution of zinc sulphate, the troughs to be filled with moistened clay. Across any desired number (six or eight, for example) of the troughs a frog's nerve could be laid, and could be excited electrically at any desired point by means of lead electrodes terminating in bits of zinc wire which could be dropped at will into any of the little pits containing the zinc solution. The apparatus had been in actual use, and had worked successfully.

DR. BLAKE read a paper, illustrated by diagrams and tracings of sound waves, on *the phenomena of audition and the telephone*, drawing comparison between the sound-conducting portions of the organ of hearing and the telephone.

The object of the experiments undertaken and described in this paper was to determine the loss of power appreciable in the telephonic transmission of the human voice by measurements of the excursions of the discs respectively of the transmitting and receiving telephones. This was done in two ways: first, by making tracings upon smoked glass with a fine platinum point attached to the centre of the disc, the tracing being there measured under a microscope with micrometer eye-piece; and, second, by inserting the telephone disc in a circuit, with a micrometer screw, between a single-cell bichromate-of-potash battery and a delicate galvanometer. The measurements made in these two ways coincided very nearly in their results, and showed a difference of movement in the receiving as compared with the transmitting disc, which may be stated as indicating a loss of power in transmission equal to 92.8 per cent.

In addition to these measurements a comparison of the vibrations in the air-chambers of the two telephones had been made by tapping the chambers and connecting them with two Koenig's manometric flames, whereby it was shown that the flame corresponding to the transmitting telephone exhibited the tongues characteristic of the vowel sounds sung into the telephone, while

the flame corresponding to the receiving telephone gave merely a slightly wavy line in the mirror.

The induced currents corresponding to the consonant sounds had also been tested by means of a short-coil Thompson reflecting galvanometer, and the deviations of the galvanometer had been found to correspond approximately to the logographic value of the consonants. The paper for which these experiments were undertaken had been read by request before the British Society of Telegraphic Engineers in London, at a regular meeting, May 8, 1878.

HALL'S DIFFERENTIAL DIAGNOSIS.¹

DR. HALL'S Synopsis of the Diseases of the Larynx, Lungs, and Heart has been elaborated by the American editor into a work on the differential diagnosis of all the more important general and local diseases. He judiciously states that "preference has been given to American over European authorities, as every year adds confirmation to the opinion, now widely received, that diseased conditions assume very different aspects under different climatic and sociological surroundings." The physical signs and the symptoms of the various affections are arranged in tabular form for convenient reference, and the facility thus afforded for comparison and discrimination enables this manual to supply a want often experienced in more elaborate treatises.

CLAPP'S AUSCULTATION AND PERCUSSION.²

THIS is a very carefully prepared tabular view of the physical signs obtained by auscultation and percussion, especially as interpreted by those clinical teachers of whom Dr. Flint is a notable example. Whatever criticism can be made upon the views expressed in this little manual pertains also to this class of writers as a whole. For instance, Dr. Clapp adopts the low-pitched blowing respiration described by Walshe, Flint, and others as pathognomonic of a cavity, to which the majority of auscultators would not assent. Prolonged expiration is made diagnostic of pulmonary emphysema, whereas most physicians would attribute its presence to a coexisting diminution of calibre in the bronchial tubes. The crepitant râle is said to be "almost pathognomonic of pneumonia," no allusion being made to its occurrence in pulmonary œdema and after pulmonary hæmorrhage. The old idea of Laennec in regard to ægophony is retained.

In brief, it may be said that the views of the modern German school are seldom adopted.

¹ *Differential Diagnosis: A Manual of the Comparative Semiology of the more Important Diseases.* By F. DE HAVILLAND HALL, M. D., Assistant Physician to the Westminster Hospital, London. American Edition, with extensive additions. Philadelphia: D. S. Brinton. 1879.

² *A Tabular Handbook of Auscultation and Percussion for Students and Physicians.* By HERBERT C. CLAPP, A. M., M. D., Instructor in Auscultation and Percussion in the Boston University, etc. Boston: Houghton, Osgood & Co. 1879. Pp. 97, 8vo.

We will only repeat, what was said in the beginning of our notice, that this little manual shows evidence of a great amount of care and labor in its compilation, there being hardly an error in it when viewed from the stand-point mentioned above. An index would improve a second edition.

HEALTH, LUNACY, AND CHARITY.

A BILL in conformity with the suggestions of Governor Talbot has been printed for the use of the committee of the legislature on public charitable institutions, to whom was referred the important questions of satisfying a supposed popular clamor for retrenchment, of reorganizing successfully the Board of State Charities, and of devising legislation to place the committal to asylums and care of the insane under state supervision.

The bill abolishes the State Board of Health, the Board of State Charities, and the trustees, inspectors, and advisory boards of the reformatory institutions and almshouse. It provides for the appointment of nine persons by the governor (who wishes to have them independent of party, sex, and sect), to constitute an unpaid State Board of Health, Lunacy, and Charity; to possess the powers of the two abolished boards; to examine insane people, and discharge them from asylums, if they see fit; and, in case of dangerous epidemics, to have coördinate powers with local boards of health. They may appoint and fix the salaries of their executive officers, no one of whom is to be a member of the board. The reformatory institutions are to be placed under a board of inspectors, who, as well as the trustees of the insane asylums, may be directed by the general board whenever the governor sees fit.

Although we do not share the distrust of our asylums for the insane and their management, it seems to us clear that a judicious supervision of the inmates of them by the State would be of advantage to the medical superintendents, to society, and to the insane; but this could be done by the board of charities or health, or by the two together, as well as by a new board, and at no greater expense. The reorganization of the department of charities we cannot now take time to discuss. It is recommended by their own officers, and something should be done, but we hope not in a short-sighted nor in a too Butler-fearing way. The interests at stake are too great to allow the saving of a few thousand dollars to cripple one of the most important departments at the State House. For the board of health the new plan, although intended to do so, does not promise any additional prospect of usefulness, unless it be that it is desirable to have them inspect our public institutions, and that could be done in a better way. They have nothing to gain by being consolidated, and a chance of losing everything if they must give up their present harmonious organization, enter the arena of politics, and run the risk of going to the ground, as the board of charities has done, thereby bringing sanitary science into disrepute. Looking at the matter from the stand-point of the medical profession, we think it would be much better than that to abolish the board outright, for another would soon be demanded by the State.

After so many years' experience in "boards," it is surprising that so much

is expected from a new board of nine unpaid men. So large a body would be sure to shirk responsibility, would be ignorant of their duties from want of time to attend to such a multiplicity of cares, and would be unmanageable, unless there were *at least* one paid member to give his whole time to the work. If the board of nine subdivide themselves into three bodies, as is suggested, they have at once all the supposed disadvantages, without the advantages, attendant upon three boards. The difficulty in giving the central board coördinate powers with local boards of health may be inferred by imagining what confusion there would have been if the State Board of Health had attempted to manage the last small-pox epidemic, in Boston. The relations of such a board with the trustees and inspectors of state institutions, at times, could hardly help being at least embarrassing.

In England, the experiment has been tried and has failed, owing, as some think, to "difficulties of departmental working, rather than from any error in principle," and, as others says, with some emphasis, due to an error in principle. If the well-paid board has been a signal failure in England, is not a failure more likely where the members of the board serve for nothing? It certainly is doubtful whether the *esprit de corps* of the proposed consolidated board would be the stimulus to work that it has been to the board of health.

If a thoroughly good board could be appointed, with enough paid members to secure efficiency, we are not prepared to say that the general good might not be enough promoted thereby to compensate any detriment to the board of health. At best, it would be an experiment, and in its present form not a promising one. We shall look with interest for the report of the committee to the legislature, and their recommendations. Perhaps they will show what we have not yet been able to see, how the consolidation is to save expense.

MEDICAL NOTES.

— We have received the Proceedings of the Medical Society of the State of Tennessee at its forty-fifth annual session, held in Memphis in April last. We are glad to see that the society received the benefit of a short but sensible article on Preventive Medicine by Dr. J. A. Draughon, of Nashville. The advice will be read by the readers with far more attention than that with which it probably was received by his hearers. There are a number of interesting papers, and an eloquent obituary of Dr. Paul F. Eve.

— The *Medical Times and Gazette* quotes from the *Journal des Sages-Femmes* a case of labor, attended by Professor Depaul and M. Noel Guéneau de Mussy, in which the intra-uterine cries of the fetus were distinctly heard during repeated attempts at delivery by the forceps, the head remaining at the superior aperture of the pelvis for a considerable time. Velpeau always denied the reality of these cries, and so had Professor Depaul, until this case compelled him to state that in future he must admit their possibility.

— The Russian government has offered special privileges to such medical students as will volunteer their services to medical men who are located in districts in which the plague prevails.

— The lists of the matriculation examination of the University of London

are just out, and being the first since women were admitted to all the degrees of the university they have been examined with great interest. The limited number of women who entered took very high places. Out of eleven applicants nine were passed.

—Of course the legislature have found the charges against the Danvers Hospital to be without foundation; and we agree with the committee who investigated the matter that the whole affair was discreditable to those persons who set it on foot. The superintendent and trustees of the hospital are taking the lead in the intelligent management of their trust, and we are glad to give them the credit which they deserve of having one of the very best asylums in the country.

—The following is an extract from a letter written by a gentleman in Texas, himself a sufferer from the centipede bite: "In regard to the bite of centipedes, tarantulas, etc., I have asked several persons who may be considered 'authority,' and I have come to the following conclusion: the bite of the centipede or tarantula in certain sections of the country is always fatal. In other sections the bite is sometimes fatal, generally not, but causes acute pain at time of bite, and in case of the tarantula a swelling something like a boil; in case of the centipede the flesh is killed, and sloughs off in time. Both the bite of the tarantula and that of the centipede seem to affect the nervous system. In certain places in Mexico, in Durango, for instance, the local authorities give rewards for the capture of these insects (a few cents each), and there are persons who make it their business to hunt them. I did not hear any satisfactory reason given why the bites have different results in different sections. It is generally attributed to difference in water and wood. Some few years ago a gentleman and his servant were traveling between Corpus Christi and the Rio Grande; stopping for lunch, the servant started a fire under a bush, and while blowing it a centipede dropped and fastened on the back of his neck. The man lived but three days, and died in great agony. I saw a man who has lived on the frontier for twenty-five years. He had been bitten by a tarantula, and had used camphor and nothing else. He always carries a bottle with him to protect himself against these bites. I have heard of domestic animals being bitten, some of whom died."

—In the physician's report of the Providence Reform School only one death is mentioned, namely, that of a colored boy who during his stay of two or three years in the school had been treated for rheumatism, scrofula, pleurisy, pneumonia, dyspepsia, dysentery, scarlatina, neuralgia, jaundice, disease of the heart, and Bright's disease of the kidneys.

—A subterranean forest of oaks has been discovered in Germany, in a valley watered by the river Fulda. Dr. Maesta, a government geologist, who made the discovery during an official exploration, pronounces the trees to be of enormous size, and to date back in their origin to a remote period.

—M. Vergely, of Bordeaux, concludes: (1.) That the existence of heart disease does not contraindicate the use of anesthetics. (2.) That chloroform is a sedative in this class of diseases. (3.) That it should be used with discretion. M. Vergely has given it in palpitation from mitral insufficiency, in angina pectoris and other affections characterized by dyspnoea and palpitation, and thinks this agent has been used too timidly and unsystematically. We

sincerely hope his influence will not increase the use of this dangerous anæsthetic.

NEW YORK.

—A family in Brooklyn have lately been suffering from supposed trichinosis, and one of their number, an old lady, died. Before her death she was seen by five physicians, all of whom concurred in this diagnosis, the disease being attributed to raw ham, which all the family had partaken of. At the autopsy, however, although portions of muscles from various parts of the body were microscopically examined, no evidences of trichinæ were discovered, while advanced disease of the kidney was found. Still it is possible that when more complete examinations of the muscular tissue have been made, the diagnosis of trichinosis may be confirmed. The other members of the family are reported as improving. Since this case came to light the board of health have been collecting samples of pork from various dealers for the purpose of having them examined.

—At the last meeting of the County Medical Society, the special committee on the metric system presented its first report on the advisability of a prompt adoption of the system, and (without seeking them abroad) quoted as encouragements and harbingers of success the following: the recent action concerning it of the Rhode Island and New Hampshire state medical societies, and of the American Ophthalmological Association; the application of the metric system in all the branches of the United States marine hospital service; the pledge of the Boston physicians and pharmacists to use and to promote the use of it; the fact that eminent professors, such as John C. Dalton, C. F. Chandler, and others, use it in their lectures, and also that many of the leading pharmacists of this and other cities are strongly in favor of its adoption.

—Mr. Kidde, superintendent of public schools, has recently made his annual report to the board of education. From this it appears that the average attendance at the schools during 1878 reached the enormous number of 130,276, which is an increase of 3568 over that of the preceding year. The superintendent complains of overcrowding in the various school-buildings, but says that their sanitary arrangements are good, a statement which may possibly be open to some question. There can be no doubt, however, that owing to the exertions of a special committee of the Medico-Legal Society, and especially to the indefatigable efforts of its chairman, Dr. O'Sullivan, considerable reforms in their sanitary condition have from time to time been effected. In 1871 the average number of pupils in attendance at the schools was only 84,000, and the increase since then is due, to a considerable extent, to the enactment and enforcement of the "truancy law" four or five years ago. In 1878 the whole number enrolled amounted to 263,371.

PHILADELPHIA.

—During the past few months, cases of influenza have been so numerous in this city as to constitute a veritable epidemic of catarrhal fever. Dr. Da Costa called attention to this in a clinical lecture recently, at the Pennsylvania Hospital, in which, after alluding to its prevalence, he spoke of some of its

peculiar features, which may be stated briefly as follows: The ordinary appearances of coryza are generally present in the patients attacked by the influenza; the throat may also be affected, but whether this be the case or not, it is generally found that the submaxillary and cervical lymphatics are swollen and tender. The pharynx appears congested, and the tonsils are swollen. There is some bronchitis in the greater number of cases, but rarely to any marked extent; there is, however, a strong tendency to pulmonary congestion and pneumonia, which may involve both lungs. In other patients the force of the poison seems to be expended on the gastro-intestinal tract, and vomiting, cramps, and diarrhoea may ensue. Jaundice has been noticed. There is not much fever, except when there is a complication. The nervous symptoms are very interesting. In some cases the headache and delirium simulate meningitis; in others there is exalted reflex activity of the spinal chord, and spasms of the limbs occur. Painful, burning spots appear on the surface, and there is aching pain in the loins and back of the legs, with stiffening of certain groups of muscles. Facial neuralgia of both trigemini is not uncommon. Depression is quite a prominent feature in these cases from the beginning, and weak and elderly subjects are apt to die, especially if lung complications supervene. Many are attacked by the epidemic who have not been out of their rooms for months. Some of our prominent citizens have succumbed to this disorder, and the great mortality from pneumonia has attracted general attention. The features are those of a low fever, and a supporting treatment is required throughout. Many cases take milk punch or wine with marked benefit, while Dover's powder and quinia are given in moderate amount. During convalescence iron is generally needed in some of its preparations.

— The Philadelphia County Medical Society, through their committee on hygiene, have memorialized the legislature in regard to the control of inebriates and habitual drunkards. The draught of the bill submitted recommends their commitment to an inebriate asylum for a period of not less than four months, for treatment. It is hoped that eventually a state inebriate asylum will be provided for these unfortunates.

— Dr. Charles S. Turnbull reports¹ a case of traumatic perforation of the membrana tympani, with fracture of the handle of the malleus, which united under treatment, but with some displacement. In three months from the accident (thrust of a pen-holder into the meatus by a mischievous boy), the hearing was normal.

SHOT-GUN QUARANTINES.

MR. EDITOR, — During the prevalence of the late epidemic of yellow fever frequent allusions were made in both the secular and medical press to the "shot-gun quarantines" maintained in many parts of the South. But few of the readers of the JOURNAL, however, can have any definite idea of the conditions that led to the establishment, or of the consequences attending the enforcement of this means of self-protection, which was resorted to by so many local communities in the absence of any central authority either for instituting

¹ Philadelphia Medical and Surgical Reporter, February 22, 1879.

or restraining such measures. The state of alarm and panic that prevailed through the Southwest as the epidemic increased in virulence and invaded many points that had previously known it only by tradition, and the popular belief in the marked personal contagiousness of the disease, resulted in producing a state of feeling that in many places seemed to have annulled all the claims of humanity, or even of kindred and family ties.

In many cases the small towns quarantined against the larger ones where the disease prevailed, and refused to allow the trains to stop, or at least to permit the passengers to leave them, the depot platforms being patrolled by armed guards whose *mot d'ordre* was, Move on! As about the same order of things existed at all the stations on some lines of railroad, baggage and freight cars filled with refugees who could not escape to the North or West were often detached on side tracks, where they served as a shelter for the inmates for days at a time. If a case of suspicious sickness occurred among the unfortunate refugees they were ordered to move on under penalty of having the cars burned.

Many persons traveled long distances on foot or horseback through woods and swamps, making long *détours* around the quarantined towns to reach points of rest and safety. Refugees taken sick on the cars were often forcibly expelled, and left on exposed railway platforms to the chance mercies of any good Samaritan whose sense of humanity overcame his fears. Neighbors quarantined against each other where any exposure to contagion had occurred. If an absent member of a family returned from an infected point, non-intercourse was established by the whole neighborhood for a week or two.

In most of the towns the local police force was supplemented by details of the citizens, who mounted guard by day and night, and prevented the entrance of any persons to the town save under such regulations as they saw fit to establish.

A personal letter from an intelligent and responsible merchant of Memphis, detailing the experiences of himself and family with the "shot-gun quarantine," gives such a vivid picture of the sufferings inflicted on thousands of people endeavoring to escape from the prevailing scourge that I cannot more forcibly present the facts to your readers than by quoting freely from his letter.

With his wife and family of six young children, Mr. F. left Memphis on August 14th, expecting to reach Hot Springs, Ark., on the following morning; but on arrival at Gallaway, a town twelve miles east of Little Rock, at two in the morning, the train was stopped by the board of health, and ordered to remain in quarantine for forty-eight hours, to which ten days additional detention was added subsequently.

Here, at an out-of-the-way station, on an old, dilapidated platform, about four hundred people were exposed without food or shelter, most of them wishing to reach distant points in Missouri, Arkansas, and Texas. Among them were many women and children without escort, whose husbands and fathers were anxiously waiting their arrival. The panic-stricken people of the vicinity refused to permit the unfortunate refugees to approach their wells or yards, armed guards being placed around the fences. With a grim humor that old soldiers will appreciate, the writer says, —

"I have had some experience in my life with skirmishers on picket duty, but the quarantine guards far outstripped the skirmishers in point of duty, and sticking right close to it."

The refugees held an indignation meeting, and a piteous memorial setting forth the distressing circumstances of the quarantined people was prepared, and sent to the board of health at Little Rock, praying that the train and its passengers might be permitted to run past the city at lightning speed; but the authorities had determined on rigid quarantine, "and as far as that lot of passengers was concerned it was rigid enough, God knows." After a day spent in the broiling sun and a night in the swamp, and by the display of considerable strategy and the free use of money, Mr. F. secured a man who agreed to take his family through the swamps to Pine Bluffs, Ark., where they had relatives with whom they expected to find rest and shelter.

They started on their journey in one of the springless carts of the country, but after forty-eight hours' travel found that the all-pervading panic had invaded the swamps. They were not allowed to approach the houses to procure food or water for themselves or their mules. "Wherever we applied. Move on! Move on! was the cry, and move on we did." They subsisted mainly on green watermelons gathered "unobserved." In a solitary instance a settler near the road consented to sell them some corn-bread and bacon, he to place the food on the corner of his lot, our traveler to place his money there. "Both of us complied with the contract religiously; we left our money and our blessing."

In this way they traveled through the swamps, where the dews were so heavy they could be wrung from their clothes at night, and where the sun poured down with consuming fury by day, till the suburbs of Pine Bluffs were reached. Here they were halted by guards, and ordered back, refused permission to reach the houses of their relatives, although none of the party were sick or affected in any way. Expostulation or reasoning was in vain. "Quarantine had been established, and no one could enter Pine Bluffs by land or water." Again their journey was resumed, and after a weary tramp of twelve miles through the woods a lone house was found, where a Dr. Saunders hospitably received them, and where they proposed to remain for "forty days," or any other time that the strictest quarantine authorities could require. But the nearly famished travelers had hardly seated themselves at their first meal, when a delegation arrived from the people living in the surrounding country, who, on learning that the party had been expelled from Pine Bluffs by the quarantine, resolved to institute a quarantine for themselves. Their expulsion was demanded, and refused by their host, and the refugees determined not to be driven out. But they changed their minds when the delegation returned in augmented numbers, and, after quietly listening to the expostulations and entreaties of the refugees, they informed them that the possibility of the introduction of infection to the community could not be entertained, "and you must leave here forthwith, or we will burn the house over your heads, and then drive you out." "We looked at the group of twenty stalwart men, then at our wife and children, and concluded to go."

A relative whose wife had just been confined had visited the refugees, and

on returning to Pine Bluffs was quarantined, expelled from the town, and prevented from seeing his sick wife. Determined to subject no one to the ills they had become heir to, the family started again for the woods, having decided that "the more we see of some men the better we like dogs." Here they lived and slept for a time in the open air, and seemed to have instituted a quarantine for themselves against the world in general. Through the intercession of friends the family were finally removed to the race track of the town, and guards placed over them. One of these having dined with the family one day, and being discovered by the officer of the guard, the unfortunate fellow was quarantined with them.

At the expiration of ten days they were permitted to go to the house of a relative on parole, not to leave it for forty-eight hours. But their troubles were not yet ended. From their exposure in the woods and swamps most of the family had become infected with the troublesome red ticks of the South, some had been poisoned by the ivy and oak, and fever and ague had set in. They did not dare to send for a physician lest they should be considered sick with contagious disease, and again expelled, so the family physician at Memphis was telegraphed to, and prescriptions sent.

In conclusion, the writer says, "I have given you a plain recital of an experience with the "shot-gun quarantine" similar to that of thousands, but with many it was far more bitter. I can now review it calmly, and laugh at some of the incidents of travel and *travail*, but it was no laughing matter then. I must now frankly admit that a strict, rigid quarantine saved Arkansas from yellow fever; therefore I do not blame the people or harbor resentment for what I then thought acts of barbarism and selfishness. But they should have provided shelter and the necessities of life for refugees, and I am informed that they did the best their means permitted later in the epidemic.

"Since my return I have conversed with many citizens of our own and adjoining counties, who are unanimous in their convictions that, were the fever again to appear, rather than allow refugees to enter their neighborhood tracks would be torn up, bridges destroyed, and a state of affairs inaugurated that sickens one to contemplate, as the fact is generally cited that the places that enforced rigid quarantine escaped, while those whose hospitable doors were opened unfortunately suffered severely."

Personal observation during the epidemic and extended official intercourse with the people of the districts liable to infection with yellow fever enable me to testify to the state of alarm and panic that prevailed, and to the experience here detailed as being fairly illustrative of the sufferings of thousands of flying refugees, and also to the fact that on the reappearance of a similar epidemic the same conditions would be repeated in a greatly exaggerated form. The experience of the past season has confirmed the popular belief in the communicability of the disease from person to person in suitable localities, and in the efficacy of keeping the contagion out of these places. Segregation of the population and isolation of the sick, combined with sanitation and disinfection, are believed by the experienced physicians of the South to be the most efficient means of preventing the spread of yellow fever, and on the reappearance of an epidemic the first-named measures would be extensively employed, but the sufferings that would attend the general institution and enforcement of

these measures, unless intelligently directed and proper means provided for the accommodation of the sick, and the well held under observation, will be too apparent to require farther comment. Proper legislation on the part of the general government and the States interested is imperatively required to prevent the recurrence of the wide-spread distress and suffering that prevailed during the past season. W.

SHORT COMMUNICATIONS.

ABSENCE OF SALIVA.

BY EDWARD P. BRADBURY, D. M. D.

IN December last a young man twenty-four years of age came to the Dental Infirmary of the Massachusetts General Hospital for advice concerning artificial teeth. The first peculiarity presented was his statement that he had never erupted either temporary or permanent teeth. On examination, however, there were found what appeared to be the remains of the inferior six-year molars, but no other indications of teeth. But the more striking anomaly was seen in the total absence of saliva, neither the parotid, submaxillary, nor sublingual gland giving the least evidence of salivary secretion. The tongue, which was deeply serrated transversely, and the soft parts were dry and leathery, so that his speech was thick and apparently labored. In consequence of this condition he had never been able to take solid food of any kind, but had subsisted entirely upon soups and soft, moist food. He was, however, perfectly well, and his food was digested apparently as completely as though it had been mixed with the usual amount of saliva.

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 22, 1879.

Cities.	Popula- tion estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from					
				The Pri- mal "Zymo- tic" Diseases.	Pneumo- nia.	Diphtheria and Group.	Scarlet Fe- ver.	Diarrhoeal Diseases.	
New York	1,085,000	551	26.48	20.87	11.78	5.99	9.07	2.52	
Philadelphia	—	353	—	—	—	4.22	1.93	—	
Brooklyn	564,400	209	19.28	22.01	11.48	9.57	6.22	0.47	
St. Louis	—	110	—	9.09	11.82	3.64	—	3.64	
Chicago	—	122	—	14.75	10.66	6.56	—	—	
Baltimore	365,000	131	18.71	15.27	11.45	6.87	2.29	—	
Boston	356,500	189	20.34	15.11	7.19	7.91	4.32	1.44	
Cincinnati	—	101	—	—	—	—	12.87	—	
District of Columbia ..	160,000	71	23.13	12.66	16.90	2.82	4.23	1.41	
Pittsburgh	—	45	—	17.78	13.33	11.11	2.22	2.22	
Milwaukee	—	38	—	10.52	13.16	10.52	—	—	
Providence	101,000	29	19.46	17.26	6.88	6.88	6.88	—	
New Haven	—	22	—	13.64	13.64	9.10	4.55	—	
Charleston	—	25	—	8.00	8.00	—	—	4.00	
Lowell	53,300	13	12.71	—	7.69	—	—	—	
Worcester	52,500	20	19.86	15.00	15.00	15.00	—	—	
Cambridge	51,400	22	22.31	13.64	9.09	9.09	4.54	—	
Fall River	48,500	15	16.13	—	6.67	—	—	—	
Lawrence	38,200	24	32.76	12.50	25.00	8.33	—	—	
Lynn	31,000	9	13.81	11.11	11.11	11.11	—	—	
Springfield	31,500	13	21.52	15.38	7.69	7.69	7.69	—	
New Bedford	27,000	—	—	—	—	—	—	—	
Salem	26,400	7	13.83	14.29	—	14.29	—	—	
Somerville	23,350	16	35.78	18.75	12.50	12.50	—	—	
Chelsea	20,800	3	7.52	—	—	—	—	—	
Taunton	20,200	6	15.49	—	16.67	—	—	—	
Holyoke	18,200	4	11.46	—	—	—	—	—	
Gloucester	17,100	8	24.39	12.50	—	12.50	—	—	
Newton	17,100	2	6.16	50.00	50.00	—	50.00	—	
Haverhill	15,300	7	23.86	28.57	42.87	28.57	—	—	
Newburyport	13,500	4	15.46	25.00	25.00	—	—	—	
Fitchburg	12,500	4	16.68	75.00	25.00	—	—	—	

Two thousand one hundred and twenty-three deaths were reported: 347 from consumption, 194 from pneumonia, 102 from scarlet fever, 84 from diphtheria, 57 from bronchitis, 47 from croup, 30 from whooping-cough, 28 from typhoid fever, 24 from diarrhoea and dysentery, 10 from erysipelas, and 10 from cerebro-spinal meningitis. Allowing for Cincinnati, not fully reported, the decrease in the total mortality is slight; from acute and chronic pulmonary diseases, erysipelas, cerebro-spinal meningitis, and scarlet fever marked; from diphtheria considerable. The mortality is very much increased from diarrhoeal diseases, and marked from typhoid fever, whooping-cough, and croup. No deaths from small-pox, measles, or *cholera nostras*. Philadelphia reported 55 deaths from acute lung diseases, not included in the above.

From *bronchitis*, 26 deaths were reported in New York, seven in Brooklyn, six in St. Louis and Baltimore, four in Chicago, three in Pittsburgh, two in District of Columbia, one in Milwaukee, New Haven, and Charleston. From *whooping-cough*, 13 in New York, eight in Brooklyn, four in Philadelphia, two in Chicago, one in Baltimore, District of Columbia, and Providence. From *typhoid fever*, 10 in Philadelphia, three in New York, Brooklyn, and Baltimore, two in St. Louis and Chicago, one in Boston, District of Columbia, Pittsburgh, Charleston, and Lawrence. From *cerebro-spinal meningitis*, three in Chicago and Fitchburg, two in New York, one in Baltimore and District of Columbia. From *erysipelas*, three in Chicago and Baltimore, one in Brooklyn, Boston, Somerville, and Newburyport. Baltimore reported two deaths and Charleston two deaths from *trismus nascentium*; Baltimore one from *tetanus*. In the District of Columbia there was one death from intermittent fever, and the death-rate among the colored people was two and one fourth times that of the whites. Pulmonary diseases were very prevalent in Nashville, Cleveland, San Francisco, and Mobile; scarlet fever in Buffalo, Richmond, and less so in Cleveland; diphtheria in Buffalo and San Francisco. Severe influenza diminishing in Providence. The returns from eighteen of the nineteen cities of Massachusetts, with a population of 850,300, showed an increased mortality from scarlet fever; about the same from diphtheria and cerebro-spinal meningitis, and diminished from the other "zymotic" diseases and pneumonia.

Sergeant Purcell's meteorological record for the week, in Boston, is as follows:—

Date.	Barometer.	Thermometer.		Relative Humidity.			Direction of Wind.			Velocity of Wind.			State of Weather.			Rainfall.	
	Daily Mean.	Daily Maximum.	Minimum.	Daily Mean.			7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration in Hours.	Amount in Inches.
Feb. 16	30.430	28	37	12	62	50	70	60	SW	SW	SW	5 15 9	C	C	H	—	—
" 17	30.319	23	35	24	62	69	100	77	N	NE	E	6 17 37	O	O	S	—	.11
" 18	30.145	23	28	17	100	100	85	95	N	N	N	17 18 15	S	S	O	28.0	.21
" 19	30.360	18	22	9	90	85	86	87	N	N	N	12 10 7	S	S	S	—	.67
" 20	29.890	19	29	14	100	100	100	100	N	NE	N	14 27 24	S	S	S	—	1.25
" 21	29.780	15	21	10	65	43	53	53	NW	NW	NW	28 30 28	O	C	C	55.5	.02
" 22	29.827	18	26	7	57	11	79	49	W	W	S	16 9 5	F	F	O	—	—

Weekly Summary.	Barometer.		Thermometer.		Humidity, Saturation being 100.		Wind.	Rain.
	Mean 30.107		Mean 21.3		Mean 74.6		Total miles traveled, 2579.	Total amt. 1.66 in.
	Max. 30.469		Max. 37		Max. 100		Prevailing direction, N.	Duration, 83 hrs. 39 min.
	Min. 29.716		Min. 9		Min. 11			
	Range .753		Range 28		Range 89			

Barometer corrected for temperature, elevation, and instrumental error.

Explanation of weather symbols: O, cloudy; C, clear; F, fair; G, fog; H, hazy; R, rain; S, snow; L S, light snow; T, threatening.

Station: Latitude 42° 21'; longitude 71° 4'; height of instrument above the sea, 77.5.

For the week ending February 1st in 159 German cities and towns, with a population estimated at 7,531,651, the death-rate was 25.8, a trifle greater than for the previous week, pulmonary diseases remaining about the same. Diphtheria had diminished, especially in Berlin, although still prevalent, and particularly so in Königsberg, Dantzic, Munich, Augsburg, Dresden, Hamburg, and Strasbourg. Measles and scarlet fever remain about the same, although less severe where they have been raging. The other "zymotic" diseases, especially typhus, have increased. A local epidemic of typhus fever in the village Wielitzken has been incorrectly reported as the plague. Diarrhœal diseases are becoming more prevalent, especially in Königsberg, Berlin, and Munich. No deaths from small-pox. The death-rates were in Dantzic 31.0; Kiel 17.3; Breslau 27.7; Munich 33.0; Stuttgart 20.3; Augsburg, 38.7; Dresden 23.4; Cassel 20.2; Erfurt 11.7; Berlin 24.4; Leipsic 16.4; Hamburg 27.0; Hanover 17.1; Bremen 26.0; Cologne 29.3; Frankfort-on-the-Main 23.0; Wiesbaden 14.4, — highest in Augsburg, lowest in Erfurt.

Small-pox showed an increase in London and decrease in Vienna, Budapesth, Paris, Barcelona, Geneva, Warsaw, Dublin, and St. Petersburg; a few deaths were reported in Prague, Odessa, and Lisbon. Scarlet fever remained about the same in Liverpool and Birmingham. Typhus fever is somewhat less rife in St. Petersburg. Diphtheria was still very fatal in Vienna, Paris, St. Petersburg, and Warsaw; increasing in London.

Typhus fever is widely prevalent in Russia and European Turkey, but no authentic cases of the plague have occurred outside of the sanitary cordon on the two sides of the Volga, inclosing an area about one hundred and twenty miles long and forty miles broad. Even there only a very few recent cases or deaths have been reported; the river is still frozen and the weather cold; very little communication takes place naturally at this season of the year with other towns, as there are no railroads in the district. The distinguished epidemiologist, Hirsch, is one of the German commission to investigate the epidemic. He states that it is the Indian form of the plague, which was fatal in the fourteenth century; it was imported, doubtless, from Persia, and is dependent for its origin, at least, on indescribable filth and misery.

At a meeting of the second class of the Harvard University Medical School, February 17, 1879, the following resolutions were unanimously adopted:—

Resolved, That in the sudden death of our late classmate, Leopold Lobsitz, we have sustained the loss of an ardent worker, a thorough student, and one of rare ability and strong parts, — a genial and kind-hearted companion.

Resolved, That we extend our deepest sympathy to his family in this hour of their affliction.

Resolved, That copies of these resolutions be transmitted to Mr. Lobsitz's family, the daily papers of his native city, the Boston Medical and Surgical Journal, and Harvard College papers, for publication.

Boston, February 18, 1879.

BOOKS AND PAMPHLETS RECEIVED.—*A Manual for the Practice of Surgery.* By Thomas Bryant, F. R. C. S. With Six Hundred and Seventy-Two Illustrations. Second American from the third revised and enlarged English edition. Philadelphia: Henry C. Lea. 1879. Pp. 945.

Electricity in its Relations to Medicine and Surgery. By A. D. Rockwell, M. D. (Reprint.)

The Yellow Fever Epidemic in the Fourth District of New Orleans. By Joseph Holt, M. D.

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LECTURES.

A CLINICAL LECTURE ON CHRONIC GASTRO-DUODENAL CATARRH.

BY J. P. OLIVER, M. D.

CASE I. A. B., eight years of age, a delicate-looking child, of healthy parents, for some months past has at times complained of languor and weariness; is apt to be dull and disinclined to play; does not care to go out; grows pale; loses flesh; has occasional headache, not very severe; is restless at night; grinds her teeth; has bad dreams; wakes up suddenly in terror, and at times with pain in the legs. The appetite is capricious; to-day there is none whatever, to-morrow it may be voracious. After eating she will frequently complain of pain in the region of the stomach and small intestine. The tongue is at times clean, and again it has a moist, milky coat, through which the papillæ show prominently. The tip and edges are usually clean and not particularly red. The bowels may be constipated, or they may be so for a few days, and then a little loose, or the child may have a slight clay-colored operation daily for a week or ten days. The breath at times is very offensive. In cold weather she always has considerable follicular pharyngitis. Now this condition of things persists till the child has what the mother calls a bilious attack, that is, headache, nausea, vomiting, and diarrhœa. She then keeps her bed a few days, and after that is a little better for a while, but in the course of a few weeks she goes through the same thing again. She often has a little cough. When the stools are clay-colored she is more likely to complain of headache and intestinal pains, likewise of the pains in her legs. Her temperature is never above the normal unless the so-called "bilious attack" is protracted. Her parents and friends have ascribed the trouble to various causes, — worms, second dentition, and incipient phthisis.

CASE II. C. D., aged seven, looks tolerably well, but is subject to periodical attacks of indigestion, called by the parents, as in the previous case, "bilious attacks." Every few weeks she loses her appetite; her bowels get constipated; the constipation is followed by nausea,

vomiting, and diarrhœa, or in the place of diarrhœa she may pass hard, scybalous masses of a clay color. Sometimes the vomiting is very severe, and persists for a whole night, leaving the child thoroughly worn-out and exhausted when morning comes. Her appetite does not return very readily, and when it does come back she is well for a few weeks only, when she again has a similar attack.

CASE III. E. F., aged five, is another delicate-looking child, very pale, with eyes somewhat sunken, skin thin and hanging loosely to the bones, and capricious appetite. Her mother thinks that she lives on air at times. The child had pneumonia about two years ago, and the mother dates the present trouble from that illness. She is restless at night, and grinds her teeth. She usually goes to bed at seven o'clock, but frequently lies awake till nine or ten. During the cold weather she is never warm; is always hanging over the fire; is tired easily; sometimes after a short walk she will throw herself on the lounge, saying that she is too tired to play. Often she is feverish and fretful in the morning; nothing seems to satisfy her, and she cries readily. Once in a while she has attacks of what her mother calls "indigestion," that is, vomiting with purging or obstinate constipation.

The foregoing are examples of what, in my experience, is a very common affection in childhood, especially in girls, between the ages of four and twelve. Sometimes the symptoms are not well marked. The patient does not have the explosive or so-called "bilious attacks," and the parents do not seek advice until the condition of emaciation or a slight cough suggests the terrible name of phthisis. The symptoms often come under the head of that vague term "general debility," and I am very sure that in children these symptoms mean nothing more nor less than gastro-duodenal catarrh.

The affection is often met with after some exhausting disease like pneumonia or typhoid fever; it may, however, occur without being preceded by either of those affections. I presume that during the fever the system becomes so exhausted and debilitated that the digestive organs partake of or share in the general weakness. In these cases the appetite is at times voracious, and if the child is allowed to indulge it the penalty for the indiscretion is generally pretty severe; an acute attack is developed, with its train of distressing symptoms, such as pain in the head, nausea, vomiting, intestinal pain, and perhaps diarrhœa.

As is well known, a child is not nourished by the bulk of food he takes into his stomach, but only by the food he can digest. In all children there is a constant tendency to acid fermentation of their food. This is very marked in feeble children; it may be due to their diet. The mucous membrane lining the intestinal tract is naturally active, and on the slightest irritation pours out suddenly and freely an alka-

line secretion; if they have overeaten, or if starchy food has too largely entered into the diet, fermentation is set up, and an acid is formed which stimulates the mucous membrane to further secretion. Now this excess of mucous is the *fons et origo mali* under consideration, for it interferes with the digestion and absorption of food. As a result, the child is imperfectly nourished, and from lack of nourishment the symptoms which come under the head of general debility, or properly, in these cases, gastro-duodenal catarrh, are developed. As I before stated, the affection is more common in girls than in boys. With careful parents, some children seldom have the explosive attacks. The cases are less severe, but the child is half sick all the time.

The affection may follow the exanthemata, pneumonia, pertussis, or typhoid fever. During second dentition it is extremely common, and often mothers believe this process to be the occasion of the child's ill health. Worms are also supposed to be a cause of the illness, and it is not surprising that mothers think so, for it is not unusual to find in these cases lumbrici or oxyuri. The excess of mucus which is secreted forms a favorable nidus for the development of the worm, and consequently the parasite is less a cause than a result of the disease.

The symptoms, then, may be briefly enumerated as follows. I refer to the chronic gastro-duodenal catarrh, not the acute affection; the so-called "bilious attacks" which occur in these cases are simply the affection rendered acute for a few hours or days, and need not be described.

First, the child's appetite is capricious, or fails altogether; he is constipated, and perhaps the constipation is followed by diarrhœa for a day or two. After this state of things has gone on for a time he complains of feeling tired on slight exertion, is languid, indisposed to play. At times he is fretful and feverish; restless at night; grinds his teeth; wakes up suddenly with severe pain in his legs, or in great terror. The child emaciates; the eyes are sunken and surrounded by dark rings. The skin becomes thin, harsh, and dry. There may be nausea and slight headache, with blurring of the eyes, and in older children muscæ volitantes. Through all this the tongue may be tolerably clean, or it may have a light, milky coat with the papillæ showing through prominently, the latter fact being generally significant of digestive disturbance in children. The so-called "worm tongue" may exist; that is, a tongue tolerably clean on the tip and edges, with a coating of shiny mucus in the centre. The tongue is seldom markedly affected. The breath is often very offensive, though foul breath may be due to the disordered stomach, or to buccal or pharyngeal catarrh. The cough which may be present is due to either slight bronchial catarrh or follicular pharyngitis. You frequently find hypertrophied tonsils in these cases, and the decomposition of the

thick, yellow secretion will account for the foul breath. I believe that I have before alluded to the occasional pain in the epigastric region and the region of the small intestine after eating. Ear-ache is not at all uncommon in these cases.

After a careful examination, if we find the symptoms to be due to the gastro-duodenal catarrh, if we recognize the weakness of the digestive system and see the evidences of defective nutrition, our indications for treatment are plain enough. We must increase the nutrition, that is, increase the supply of food; but at the same time we must be careful in our selection, as the fact that the digestive system is feeble must ever be before us.

Treatment. First, the diet is to be arranged; as the tendency to fermentation is so marked in these cases, I eliminate the starchy foods as much as possible. You cannot deny a child of from six to twelve years bread and potato altogether, but you can arrange an agreeable and varied diet so that he shall get a minimum quantity of these articles. Many physicians believe that such cases would be benefited if oatmeal and cracked wheat should enter more largely into the diet; it is not so, however, according to my experience. It seems to me that oatmeal and cracked wheat illustrate most admirably the old adage that "what is one man's meat is another man's poison." Particularly in the summer season should the oatmeal be interdicted.

In these cases I generally order a cup of weak mutton, chicken, or veal broth to be given to the child as soon as he wakes in the morning, before he gets out of bed even; a good-sized teacupful is enough; of course it must be warm; then an hour or so later a little toasted bread or stale French bread. The crust of the long French roll is excellent, and children usually like it. A cup of milk and a hard-boiled egg chopped fine may be given, to which may be added a little butter and salt, or, better still, a little cream, or, in place of the egg, a little broiled fish. At noon, a dinner consisting of beefsteak, chop, a little bird, roast beef, or mutton, not too much cooked, with meat gravy; but no made gravy or sauce is to be allowed. At night, dry bread and milk. The broth may be repeated, if not too rich, at this meal. Some mothers think this a pretty limited diet, but you should vary it as much as possible, and give four or five small meals a day instead of three larger ones. As the excessive production of mucus in the stomach and intestine is to be overcome gradually and by constant efforts, I endeavor to attain this result in two ways: first, by diminishing the production, that is, by regulating the diet; and, secondly, by clearing out the excess or over-production by means of cathartics regularly administered every third or fourth day. As cathartics I use the aqueous tincture of rhubarb, licorice powder, and occasionally a powder of jalap, scammony, and a little calomel or pil. rhei comp. In mild

cases the following recipe has often done good service, obviating the necessity of the regular administration of a cathartic :—

R̄ Podophylline	gr. i.
Alcohol	3i. M.
Gtt. three to five, morning and evening.	

The indications for this are, constipation, clay-colored stools, and loss of appetite. I do not expect to get a cathartic action from the remedy, for if it produces such an effect it must be used in smaller doses or abandoned altogether. It is to be given continually for two or three weeks, or even longer. Under its use I have seen the tongue clean, the appetite return, and follicular pharyngitis disappear completely. From five to eight grains of calomel are sometimes given with good result, but as it is very unpopular treatment among many persons I seldom employ it, as other things seem to act as well.

One word more in regard to the podophylline: if the patient should have two or three dejections a day, the dose must be diminished about one half. The good effect of the medicine is not seen for several days. After cathartics alkalies are of next importance,—the bicarbonate of soda or potassa, given in a bitter infusion, say cascarilla, chiretta, gentian, or columbo. In lax conditions of the mucous membrane, where a tonic action is required, the tincture of myrrh is much used, and I have added it to the alkali and bitter infusion with advantage. The latter is usually intensely disagreeable to children, and sometimes it is a difficult matter to get them to take it regularly, but if the mother understands the importance of the drug she will make the child take it. Tincture of nux vomica may be added to the infusion, or liq. strychniæ. They do not render it any more agreeable, but rather more bitter. The objection to syrup is obvious. As the child improves, a little iron may be added, but of the milder forms and in very small doses. At this stage many children will bear cod-liver oil well. Wine, such as dry sherry or good claret, may be given with dinner, and baths are a useful adjunct to the treatment; I mean sponge baths.

PUERPERAL CONVULSIONS SIX HOURS AFTER LABOR.¹

BY O. W. DOE, M. D.

Mrs. X., thirty years of age, the wife of a physician, always had good health until seven years ago. At that time she began to lose flesh and strength, became gradually anæmic, and suffered from all those symptoms attendant upon nervous prostration. Her mother died of Bright's disease six weeks after the birth of her seventh child, but was in perfect health at the time of the birth of Mrs. X., thirteen years before. Three years ago she first noticed enlargement of the cervical

¹ Read by invitation before the Obstetrical Society of Boston, October 13, 1878.

glands, which has since remained persistent, notwithstanding various methods of treatment pursued both in this country and in Europe. She married at the age of twenty-seven. The catamenia, which had always been regular, last appeared on August 31, 1877. During the following six months, excepting occasional nausea, she seemed to enjoy better health than for seven years previously.

In the latter part of March she first noticed some swelling about the feet and ankles, but nothing abnormal was detected on examination of the urine. This swelling gradually increased, so that by April 7th her legs had become quite œdematous. At this time the urine showed the presence of albumen estimated at about one fourth of one per cent. Her appetite and digestion continued unaffected. There was no nausea, headache, or impairment of vision. The glands on the right side of the neck had taken on increased action, one having attained the size of an English walnut. By May 1st the œdema had become quite marked about the face and hands, and she had considerable difficulty in walking. At this time a general pruritus developed itself, and became so intense that sleep was obtained only by the use of opiates. External applications of carbolic acid, tincture of aconite, bromide of potash, and belladonna were used without benefit; warm baths afforded only temporary relief.

On the 10th of May the urine contained about one half of one per cent. of albumen, but no casts. The quantity passed varied from forty to fifty ounces daily. During the next ten days the œdema gradually increased and the pruritus continued unabated. At night she had some dyspnœa, obliging her to lie with her shoulders raised. The urine diminished in amount from forty to thirty-six ounces, and a mixture containing citrate of potash and tincture of digitalis was ordered to be taken if the quantity became less, but it was not required.

On the 20th, during the day, she experienced an occasional slight pain in the lower part of the abdomen. Towards midnight the pain increased in severity, and forty grains of bromide of potash were given to quiet her restlessness, but without effect.

At one o'clock on the morning of the 21st, a slight bloody vaginal discharge was first noticed, and, the patient becoming very uneasy, one sixth of a grain of morphia was given, which produced a quiet sleep until seven o'clock, when I was sent for. I found her free from pain and feeling very comfortable. There was no headache, nor any nervous excitement whatever. On vaginal examination the os was found dilated sufficiently to admit one finger, the cervix very thin, the membranes quite tense, and the head presenting high up. At noon the pains began to recur about every half hour, and increased in severity, so that at five o'clock ether was administered sparingly. At seven o'clock, the os being almost fully dilated, the membranes were ruptured, and the

pains became directly very strong and expulsive in character, recurring every three minutes. At 8.40 she was delivered of a healthy male child weighing eight pounds.

During the last hour of labor, the patient screamed continuously, and threw herself from one side of the bed to the other, the administration of ether apparently increasing instead of allaying the excitement, even when given freely during the pain; the placenta was expelled by pressure ten minutes after the birth of the child, and the uterus contracted firmly under the influence of half a drachm of ergot. There was but little hæmorrhage at the time of delivery, and the patient became directly perfectly tranquil, and remained so until eleven o'clock, when she complained of frontal headache, and twenty grains of bromide of potash were given and repeated in an hour. There was but a scanty lochial discharge.

At one o'clock the headache had become very severe and she vomited once. At two o'clock, while holding a cup of beef tea in her hand, she seemed partially to lose consciousness, and the eyes were turned to the left; when questioned as to what she was looking at, she answered that she did not know. There was noticed at this time frequent spasmodic action of the facial muscles. At 2.30 she had a very severe convulsion lasting fully fifteen minutes. I arrived just as it was subsiding. Dr. Ellis, who was called in a few moments earlier, had administered ether, but advised further consultation before assenting to the use of morphia, and Drs. Lyman and Minot were sent for. Dr. Lyman arrived at three o'clock, and unhesitatingly advised the subcutaneous injection of morphia, and one half grain was immediately given. Dr. Minot, arriving directly after, urged the continuation of the morphia, *pro re nata*, and suggested in addition the administration of chloral per rectum. At this time the patient was wholly unconscious, and breathing heavily; the face was markedly œdematous and somewhat cyanotic; pulse, 142. Eight ounces of urine were drawn by the catheter, and found loaded with albumen and containing granular and hyaline casts in abundance.

May 21st. 3.30 A. M.: pulse, 136; respiration, 13. 4.25 A. M.: pulse, 132; respiration, 14; temperature, 99.6° F. Chloral, twenty grains, given per rectum. Patient started up suddenly, stared wildly about her; the pupils became widely dilated, the eyeballs turned upwards, the muscles of the face began to contract spasmodically, and a general tremulousness pervaded the whole body. One fourth of a grain of morphia was injected subcutaneously, and the patient lapsed directly into her previous unconscious condition, with loud, stertorous-like breathing. 4.45 A. M.: enema of soapsuds with sweet-oil given, and one fourth of a grain of elaterium in butter placed upon the tongue. There had been no movement of the bowels for twenty-four hours.

Five A. M. : pulse, 120. 5.15 A. M. : countenance deeply congested ; respiration of a stertorous character ; patient lying in a semi-comatose condition. Enema of turpentine, soapsuds, and oil repeated. 5.20 A. M. : pulse, 116 ; respiration, 12. Started up suddenly, but lapsed directly into her former condition. 5.53 A. M. : pulse, 112. Roused partially by a sudden movement of the bed. 6.10 A. M. : pulse, 108. Started up again ; more wakeful ; protrudes the tongue, and says almost unintelligibly that she has no headache ; spasmodic twitchings of the facial muscles. One fourth of a grain of morphia and one fourth of a grain of elaterium were given. 6.37 A. M. : pulse, 104. Mutters to herself occasionally, and then lapses into a quiet sleep. 7.30 A. M. : pulse, 96 ; respiration, 9. Countenance more natural. One fourth of a grain of elaterium repeated. 7.45 A. M., aroused by the removal of the bandage, and asks repeatedly, " What is the matter ? " 8.05 A. M. : pulse, 144 ; started up suddenly with a wild, staring expression ; asks anxiously, " What is the matter, Dr. Doe ? " says she has no headache, but feels very dizzy ; face much more bloated, and of a dark mahogany color ; slight twitching of the right arm ; begs for air, and motions for the windows to be opened. Urine, sixteen ounces, drawn by the catheter ; one fifth of a grain of morphia injected subcutaneously. 8.50 A. M. : no sound sleep since the last record ; congestion of the face intense, but momentarily relieved by any sudden movement of the whole body ; is unable to lie with more than one pillow ; any attempt to elevate the shoulders brings on immediately most distressing paroxysms of dyspnœa ; abundant moist râles heard over the front of the chest ; back not examined. 9.25 A. M. : condition unchanged ; begs to be fanned constantly ; turpentine enema repeated. 9.45 A. M. : pulse, 108 ; respiration, 14. One fourth of a grain of elaterium given. 10.15 A. M. : face remains markedly cyanotic. Bled to the extent of a pint from the right arm by Dr. Minot. Pulse 104 directly after the operation. 11.35 A. M. : countenance as livid as before the bleeding. Responds to questions, though lying in a semi-unconscious condition. Two drops of croton-oil administered in turpentine enema, and one drop by the mouth. 12.05 P. M. : pulse, 104. One watery dejection containing fecal matter ; skin dry. 1.07 P. M. : hot-air bath arranged with the assistance of Dr. Bradford. One sixth of a grain of muriate of pilocarpine, given subcutaneously. 1.30 P. M. : face continues of a mahogany color, and very much bloated ; skin only slightly moist ; very little salivation ; respiration labored. Seems to be only partially conscious of what is taking place about her. 1.35 P. M. : one sixth of a grain of pilocarpine repeated. Two P. M. : free perspiration about the body and thighs ; salivation very profuse ; saliva ejected by strenuous exertions at coughing. Three P. M. : pulse, 132. Salivation and diaphoresis nearly subsided. 3.30 P. M. : pulse, 120 ; respiration, 20. Countenance less livid than one hour ago. Two

watery dejections since 1.25 P. M. Five P. M. : pulse, 120 ; respiration, 20. Lividity very much less marked ; breathes easily ; skin moist ; lies in a quiet, semi-conscious condition. 5.30 P. M. : one loose dejection. Six P. M. : pulse, 108. Perfectly conscious ; lividity almost wholly disappeared ; œdema about the face beginning to subside ; asks for members of her family, and talks with them rationally. Five ounces of enema of beef tea administered. 6.15 P. M. : dejection consisting of fecal matter and beef tea. 6.40 P. M. : pulse, 108. Another loose dejection ; is much troubled from hoarseness and abundant secretion of mucus in the throat. Took two ounces of beef juice by the mouth. Eleven P. M. : pulse, 84. Takes beef juice readily ; œdema of the face and limbs rapidly subsiding. One drachm of sweet spirits of nitre every four hours.

May 23d. 1.30 A. M. : pulse, 84 ; respiration, 15. Large watery dejection, with considerable flatus ; passes urine freely. Two A. M. : loose dejection, with flatus ; skin moist ; voice very hoarse ; no headache ; no vertigo. Takes frequent naps of from twenty to thirty minutes ; passed nine ounces of urine, containing granular and hyaline casts, and loaded with albumen. Five A. M. : pulse, 75 ; respiration, 18. Complains only of soreness about the throat ; speaks in a whisper. No difficulty in breathing ; scarcely any œdema, and no lividity of the face ; very little œdema of the legs or feet. During the day she slept most of the time. The lochial discharge being very scanty, hot bran bags were applied over the hypogastric region, and hot vaginal injections containing carbolic acid were ordered to be given three times daily. The bowels were moved freely. From this time convalescence was uninterrupted. The pulse was at no time above 98, nor the temperature above 100.2°. The secretion of milk took place normally, but disappeared after three days.

On the 24th she passed 100 ounces of urine ; 25th, 105 ounces ; 26th, 82 ounces ; 28th, 50 ounces ; 30th, 72 ounces ; and at no time less than 36 ounces daily.

On the 28th she was ordered two grains of sulphate of quinine three times a day, and Rabuteau's preparation of the chloride of iron ; but headache supervening, this was changed two days later to lactate of iron, nux vomica, and pepsine.

On the 6th of June the following analysis of the urine was made by Dr. Leland, at the City Hospital : specific gravity, 1016 ; color, pale ; reaction, acid ; sediment, considerable, containing hyaline casts quite abundant, — some with more or less granules, some with nuclei, others long and narrow ; a few finely granular casts ; albumen estimated at about one half per cent.

A second examination two and a half weeks later by the same gentleman gave the following results : specific gravity, 1011 ; reaction, strongly acid ; albumen, one half per cent. ; few hyaline casts, — some

very transparent, some very long, some wide, some with renal epithelia adhering, some containing a few highly refracting granules; few old granular casts; few very finely granular casts.

On the 20th of June the patient walked down-stairs, and drove out on the 21st. Since then she has been in better health than for years previously, notwithstanding the fact that the urine still contains albumen to a slight amount, but no casts have been found for two months past.

Two points in this case were of special interest to me: one showing the beneficial effects of morphia in warding off the threatening convulsions; the other, the apparent good results of pilocarpine.

Before the administration of this drug, considering the dyspnœa arising from the œdema of the lungs and the very marked venous congestion about the head and face, the condition of the patient seemed alarming in the extreme. Improvement began coincidently with the full physiological action of this drug; whether dependent upon it or not it is impossible to say, but the results were such as to encourage a further investigation as to its effects in similar cases.

A CASE OF FRACTURE OF THE SKULL; FRACTURED PARTS REMOVED; RECOVERY.

BY M. L. BROWN, M. D., NATICK, MASS.

H. G., a lad fourteen years old, while standing in front of a brick block in process of erection, received the force of a brick falling from the third story upon the top and posterior part of the head, which produced a lacerated wound of the scalp about three inches in length, and a comminuted fracture of both tables of the skull, two and a half inches long. The long diameter of the fracture corresponded with a line drawn from a point one inch in front of the right ear to a point one inch posterior to the left ear. A line drawn from the centre of the frontal bone posteriorly to the centre of the occipital bone bisected the part fractured.

The force of the blow felled the lad to the ground, rendering him instantly insensible. He was immediately taken up and carried the length of two blocks, across a street, into a drug store, the distance being marked by a line of blood. He was placed upon a table, and examined: he was found to be unconscious, the extremities cold and nearly bloodless, the face extremely pallid, and to all external appearances he was lifeless. A slight pulse was, however, soon felt at the wrist, and it was seen that he breathed. On discovering the nature of the wound and its immediate effects, it was thought that any operative measures would be useless, and that the final result of the injury was a foregone conclusion.

After a little time a consultation was held by the surgeon in charge of the case, Dr. A. H. Bryant, and myself. I expressed the opinion that there was a possible chance of his recovery if the fractured pieces of bone were removed, and the depressed parts elevated, thereby removing the pressure from the brain, but no shadow of a chance if left in the condition he then was. The necessary instruments were sent for; an incision was made in the scalp at right angles to the line of fracture, and a triangular piece turned back, when it was found that the anterior edge of the fracture was cleanly cut through both tables of the skull to the dura mater, and the edges of the depressed, cut fragments bore down upon and caused a depression of the dura mater and the underlying brain for about three fourths of an inch. The anterior half of the fractured portion, being broken into fragments, was separated from the posterior half by a line of fracture through the centre; the posterior half was cracked off from both tables, but was still hanging to the uninjured bone, forming a hinge joint. With a Hey's saw, a small triangular piece of bone was removed from the uninjured part at the anterior edge of the fracture. The broken and depressed fragments were then easily got at and taken out, and the portions of the fractured tables hanging as on a hinge joint were with an elevator raised as nearly as possible to their natural position; the sharp edges and corners were rounded off and made smooth, the parts thoroughly cleansed, and the deflected parts of the scalp brought down loosely over the wound; a bit of lint soaked in carbolized oil was applied, and over that lint wet in cold water.

During the latter part of the operation, the lad had spoken several times in a sleepy manner, asking to be let alone, inquiring for his mother, and complaining of being cold. When at last the depressed bone was raised and the pressure upon the brain removed, he looked more like a dead subject than a live one. A bystander startled us with the exclamation, "He's dead!" Whereupon the lad replied, "I ain't dead, either, but I am cold."

He was carried home on a stretcher, and kept on a low diet, and in a darkened room for ten days or more. For a few days there was a partial paralysis of one side and a slight difficulty in passing water, which, however, soon passed away. A lotion of carbolized cold water was kept constantly applied to his head until all danger of inflammation had passed, when he was allowed a full, generous, and nourishing diet. He made a perfect recovery without the loss or impairment of any mental faculty.

A CASE OF ŒSOPHAGOTOMY.

BY GEORGE W. GAY, M. D.,
Surgeon to the Boston City Hospital.

MRS. M., aged forty-nine years, felt something lodge in her throat while eating fish, on Friday, September 6, 1878. The accident occurred at about three o'clock in the afternoon. Dr. Luce, of Falmouth, saw the patient, passed a probang, and pursued the treatment common in such cases, but without success. He then sent her to the City Hospital.

We first saw Mrs. M. on Saturday evening, about thirty hours after the event occurred. She could swallow only a few drops of liquid, and those with considerable difficulty. No solid food had been taken from the first. There were two sore points: one near the cricoid cartilage, which had persisted from the beginning, and another opposite the centre of the sternum, which came on later, giving the patient the impression that the foreign body had moved downwards. The temperature was normal. The symptoms not being very urgent she was ordered to drink iced milk, if possible, and an eighth of a grain of morphia was given subcutaneously.

The next morning the patient was worse. Her temperature was 100.5° F., and pulse about 100. She was restless, anxious, and dejected. Deglutition was accomplished only after repeated and strenuous efforts. Careful trials were now made with sponge and bristle probangs to remove the offending substance, but without success. The instruments increased the soreness at the two points above mentioned, and on withdrawal were tinged with a single drop of blood. Another injection of morphia was given.

At a consultation held in the afternoon Drs. Thorndike, Ingalls, and Fifield agreed with me that, in view of the increasing difficulty in swallowing and the gravity of all the symptoms, an operation for opening and exploring the œsophagus was not only justifiable but imperative.

The patient was accordingly etherized, and having been placed upon a table with her head and shoulders well raised, œsophagotomy was performed in the presence of the above members of the surgical staff, and Drs. Edes, Cowles, Post, Professor Whittaker, of Cincinnati, and the house officers. An incision three inches in length was made on the left side of the neck, commencing at a point midway between the median line and the anterior border of the sterno-mastoid muscle, and extending toward the sternum. The skin, fat, and deep fascia having been divided, the sterno-mastoid was exposed. The sterno-thyroid and sterno-hyoid were then raised and drawn inwards together with the upper part of the omo-hyoid. The sheath containing the large vessels was drawn outwards and protected with a wide retractor. By means of the finger

and a director the dissection was continued down to the *œsophagus*. At the bottom of this deep wound a sharp substance was at once detected pricking through the walls of the *œsophagus*. It was seized with dressing forceps, and by careful manipulations made to cut its own way out, pus flowing by its side. The foreign body was a thin, flat fish bone, with sharp borders and pointed extremities. It was an inch and a quarter in length, and a third of an inch wide. It was imbedded in the posterior wall of the *œsophagus* opposite the cricoid cartilage. There was no hæmorrhage of importance, and not a ligature was used. The wound in the skin was closed throughout its whole extent with silk sutures. The *œsophageal* wound, being so small, was allowed to take care of itself. Simple dressings were used throughout the treatment.

From the time of the operation on Sunday until Thursday the patient was not allowed to swallow anything whatsoever. An injection, composed of four ounces of warm beef tea with a little wine or brandy and a few drops of laudanum, was administered every four hours. On the fourth day she was allowed to drink freely, and although at that time there was moderate suppuration, yet not a drop of food ever appeared in the wound.

September 18th, ten days after the operation, the wound was entirely healed. In a few days afterward she was up and about the ward, and eating eggs, oysters, and all kinds of soft food without difficulty. In short, the patient was well. She left the hospital September 26th. The wound was soundly closed, the neck free from swelling and soreness, and the voice was natural.

Remarks. Although the bone had been lodged in the gullet only forty-eight hours, yet the suffering was extreme, and pus had already formed. There was also a considerable fullness at the lower part of the neck, which made its appearance only a few hours previous to the operation. Dr. Cheever's earliest operation was performed about seventy hours after the accident occurred, but no pus was found. So far as we know, *œsophagotomy* has never before been done earlier than the third day. The wound in the above case was closed throughout its whole extent to hasten its healing, and thereby avoid a fistulous track, which is sometimes very obstinate. We had little to fear from the opening in the *œsophagus*, on account of its small size and the absolute rest to the tube that was to be enforced. With the exception of a small spot in the centre, from which there was a moderate discharge for a few days, the wound healed by first intention. Usually, in *œsophagotomy*, liquids escape from the wound for about three weeks, and six weeks or more elapse before recovery is complete.

A Counterfeit Quarter of a Dollar lodged in the Œsophagus; Expelled in Vomiting Five and a Half Months after the Accident; Recovery.—A boy, aged three and a half years, accidentally swallowed a twenty-five cent piece while lying upon his back on the floor. He was

seen by Dr. J. H. Robinson, of Southboro, who passed a probang and explored with his finger without detecting anything. The child had more or less difficulty in swallowing solid food, and for days at a time could take nothing but liquids. Hoarseness soon became developed, and persisted throughout. The patient was occasionally dull and dumpish, but never had any trouble in breathing.

Five weeks after the accident we saw the child in consultation. No soreness was complained of, nor was there any tenderness or anything abnormal to be seen about the throat. Under ether, bristle and ivory-headed probangs were passed into the stomach in the hopes of pushing the coin down or bringing it up. The throat was also explored with the finger as thoroughly as possible without finding the obstruction.

In view of the history of the case and the persistence of the dysphagia, we advised that if the symptoms did not disappear in a short time the œsophagus should be opened and explored; because if the coin was there it could probably be found and removed, and if it was not there very little harm would be likely to result from the operation. In other words, we thought there would be less danger in œsophagotomy than in leaving the child alone.

No operation was done, however, as the symptoms did not seem sufficiently urgent to the parents to demand it. During a violent attack of vomiting and purging on January 29, 1879, the missing pewter or leaden quarter was ejected from the mouth, one hundred and sixty-four days after the accident. The coin was blackened, but not eroded. The hoarseness soon disappeared, and the child was well in a week.

It seems hardly possible that a foreign body, almost an inch in diameter, could have remained so long in the upper part of the œsophagus of a child only three and a half years of age without producing pain, tenderness, and other symptoms of local inflammation and ulceration. This being the narrowest and least distensible portion of the canal, and more closely surrounded by important organs and tissues, it would not tolerate the presence of such an obstruction as would the lower part of the tube, which is more dilatable and hangs somewhat loosely in the posterior mediastinum. Hence we think the lower portion of the œsophagus must have been the resting place of this coin, and that the child's inability to swallow solid food depended upon the position of the foreign body.

Notwithstanding the fortunate result in this case, we still feel that our advice to open and explore the œsophagus was right and proper under the circumstances, and that more patients will recover by the operative than by the expectant plan of treatment. In fact, the same rule should apply here as in cases of suspected foreign body in the air-passages: if the history is clear and if the symptoms persist, operate. By so doing we shall give the patient the best possible chance for recovery.

RECENT PROGRESS IN THE TREATMENT OF THORACIC DISEASES.¹

BY F. I. KNIGHT, M. D.

*Is Consumption Contagious?*² — From the time of Aristotle to the present, various medical writers have urged that phthisis may be propagated from one individual to another through the medium of a material cause. Although we feel bound to say that the supporters of this doctrine have been in the minority, yet they include among them many of the celebrities of our profession, and there can be no doubt whatever that many of the most illustrious pathologists and clinical observers of our day coincide in this view. In Dr. R. Morton's Treatise of Consumptions, published in 1694, and Dr. T. Young's Practical and Historical Treatise on Consumptive Diseases, published in 1815, these opinions are set forth with great force and vigor. It is curious to notice that the contagiousness of phthisis is, and has been, very generally held in Southern Europe, that it has been doubted, as a rule, and especially during the last century, in North Germany and Great Britain, whilst French authorities have been much divided on the question. Since the investigations of Villemin, Wilson Fox, Sanderson, and others on the inoculability of tubercle, and the spread of the disease from local infective centres, physicians are much less inclined than they formerly were to underrate the importance of contagion as a factor in the causation of this disease.

Dr. Walshe, in 1860, considered the influence of contagion anything but proven, but in 1871 he had considerably modified his views, for he said, "My belief in the reality of such transmissibility has of late years strengthened. I have now met with so many examples of the kind that *coincidence* becomes itself an explanation difficult of acceptance." Cases due to a supposed contagion are generally of an inflammatory character, and very rapidly run on to destruction of the lungs, and a fatal termination. We are frequently asked why, if consumption be contagious, wives and husbands who have been in close attendance on their diseased consorts do not inevitably become affected. The answer to this query is that even when experiments have been carried out on animals, the tuberculizing process occasionally fails to take place, and the direct transmission of infecting particles from the lungs of one individual to another is obviously much more liable to failure. As a matter of practice, we think that it cannot be too strongly enforced that it is a very dangerous proceeding regularly to share the bed of a phthisical patient, and to be habitually in close contact with and attendance on such a person.

¹ Concluded from page 330.² London Lancet, June 8, 1878.

*Experiments on the Contagion of Phthisis.*¹—The remarkable instances now and then seen, in which persons without hereditary tendency to phthisis become phthisical after long-continued attendance on sufferers from the disease, have suggested to many physicians the idea that phthisis is contagious. If there is such a contagion, the mechanism has been supposed to be the inhalation with the breath of fine particles of tuberculous sputa, atomized into the air by the patient's cough. An attempt has been made by Dr. Tappeiner, of Meran, to ascertain whether, by a similar means, animals could be rendered tubercular, and the results of the experiments, which are published in the current number of Virchow's *Archiv*, are of great interest. The animals experimented on were made to breathe for several hours daily in a chamber, in the air of which fine particles of phthisical sputum were suspended. The sputum having been mixed with water, the mixture was atomized by a steam atomizer. In all cases the sputa were from persons with cavities in their lungs. Dogs alone were employed in the experiments, since they very rarely suffer from spontaneous tuberculosis. The result was that of eleven animals experimented on, with one doubtful exception, after a period varying from twenty-five to forty-five days, all, being killed, presented well-developed miliary tubercles in both lungs, and in most of the cases tubercles were present to a smaller extent in the kidneys, and in some cases, also, in the liver and spleen. Microscopical examination was in accord with the naked-eye appearances.

The quantity of sputum necessary for the effect is certainly a very small one. In three experiments only one gramme of sputum was daily atomized in the air of the chamber, and the quantity of dry sputum must have been exceedingly small. Two ways are conceivable in which the infection is produced. The particles certainly may reach the alveoli, for powdered cinnabar, administered in the same way, was found to have stained the alveoli in twelve hours after an inhalation of only one hour's duration. But some particles may lodge in the mucous membrane of the throat and pharynx, and thence, being absorbed, may affect the lungs as organs specially predisposed. Hence some comparative experiments were made by feeding dogs with the same sputum as that employed in the inhalation experiments. Fifteen grammes were mixed daily with the food of each dog. In two dogs fed at Munich, miliary tubercles were found in the lungs after six weeks' feeding; in six others fed at Meran, all the organs were normal, — a difference the explanation of which is not very clear. In the cases in which the disease was produced by feeding, the intestinal tract was affected, whereas it was free in those cases in which the inhalation was employed. It is remarkable that, with two exceptions, the animals, up to the time at which they were killed and found diseased, were well and lively, and indicated

¹ London Lancet, November 23, 1878.

their disease neither by emaciation nor other external symptoms. This suggests that sometimes in man a miliary tuberculosis of the lungs may remain latent, and cause no symptoms until catarrh, with foci of inflammation, sets up phthisis.

A preliminary account of these experiments of Tappeiner led Dr. Max Schottelius to make some similar experiments, not only with the sputum of phthisical individuals, but also with that of persons suffering from simple bronchitis, and with pulverized cheese, brain, and cinnabar. The result was that miliary tubercles were found in the lungs in all cases, and in equal quantity with both phthisical and bronchitic sputum. Cheese produced a smaller quantity; pulverized brain still less; and the cinnabar least effect of all, merely a few whitish tubercles with pigmented centres, with an interstitial deposit of the substance, which had caused no inflammatory reaction. Tappeiner has also experimented with calves' brains in two cases, but with purely negative results. No changes in the lung followed such as resulted from the inhalation of tuberculous sputum.

These experiments are of much interest, but they need repetition on a larger scale, in order that the discrepancies may be removed before much weight can be attached to them as evidences of a specific influence of the phthisical sputum. They unquestionably show, however, that the inhalation of foreign organic matter will cause tubercles in animals naturally indisposed to their development. The appearance of granulations in other organs than the lungs in some of Tappeiner's experiments is a fact of great importance. Whether tuberculous matter produces tubercle when given in this manner more readily than other substances or not, it appears certain that different forms of organic matter produce effects in different degrees. It appears also that the inhalation of these substances is more effective than their administration by the alimentary canal. These are facts of great importance in regard to the question of the contagiousness of phthisis.

*Electro-Puncture in Aneurism of the Aorta.*¹ — Drs. Dujardin-Beaumetz and Proust read a memoir at the recent meeting of the French Society for the Advancement of Science, in which they state that, as the result of the employment of electro-punctures in six cases of aneurism of the aorta, they are enabled to conclude that Ciniselli's procedure, as they have modified it, has become a simple operation unattended with danger, and constitutes an efficacious and rational mode of treatment. In one case, described by Dr. Proust, the patient having died from hæmorrhagic infiltration of the lungs, it became possible to show that a thick layer of fibrinous coagula existed in the portion of the aneurismal sac where the needles had been applied.

This case showed that electro-puncture could be successfully prac-

¹ Gazette hebdomadaire, September 6th. Medical Times and Gazette, September 28, 1878.

ticed in patients whose general condition was a very grave one; that the coagula was deposited at the point of application of the positive pole; and that M. Gaiffe's improved instruments should be employed. M. Teissier observed that several experiments which he had performed corroborated the above conclusions, for he had found sphacelus produced in the arterial wall at the point of application of the negative pole, while several accidents arose during the application. But the application of the positive pole never gave rise to any accident, so that Drs. Dujardin-Baumetz and Proust have good reason for modifying Ciniselli's procedure by employing only the positive pole as the active agent, applying the negative one to a moistened plate with a broad surface placed at a distant part of the body.

*The Treatment of Thoracic Aneurism.*¹—In an article contributed to a recent number of the *Revue mensuelle de Médecine et Chirurgie*, Dr. Dreschfeld, of Manchester, deals with the three chief methods of treatment of aortic aneurism, namely, that by the administration of iodide of potassium, that of restricted diet and enforced rest in the horizontal position, and that of galvano-puncture. He prefaces his record of six cases, in which some or all of these agents were employed, by a slight sketch of each method and its *rationale*. He bears strong testimony to the efficacy of the iodide, first introduced by Bouillaud, and since warmly advocated by Balfour and others, but admits that it is not positively known how it acts. It probably slows and diminishes the action of the heart and the arterial pressure,—an effect due rather to the iodine in the salt than to the potassium. Large doses (he advises small doses to commence with, and their increase up to six grammes or more), long continued, often give good results, especially in old subjects, and when the aneurism is of recent formation and small in size. Of the second plan,—best known as Tufnell's treatment,—that of absolute recumbency and a restricted, non-liquid diet, Dr. Dreschfeld states that in nearly all the cases in which he has employed it the pulse rate has been much diminished. Galvano-puncture is the most certain in its effects of all the methods, since it promotes coagulation in a threefold manner: chemically, by the electrolytic decomposition of the water and salts of the blood; mechanically, by the inserted needles acting as foreign bodies; and, thirdly, by acting as an irritant, and exciting inflammation of the wall of the aneurism. The ill results that sometimes, but rarely, happen from its use he believes to be preventable, and he has never seen any embolism occur from detachment of clot formed during the procedure. The currents employed should be of weak intensity, and the time during which they should be allowed to pass ought to be at least thirty minutes. The needles should be of steel, and should be long and fine, well pointed and polished, and coated with insulating material, such as

¹ London Lancet, October 12, 1878.

varnish or gum, except at the points. Two or three may be inserted, not too close together, and it is best to connect them with the positive pole, the negative electrode being a moistened sponge applied to the skin in the neighborhood of the tumor. In one case, however, the needles were attached to the negative pole, and with good result.

The number of elements employed should be at first small, and should then be gradually increased at intervals of five minutes; and he allows three or four weeks to elapse before repeating the operation. Details of six cases are then given. The first, an extensive fusiform aneurism of the ascending aorta in a gardener thirty-eight years of age, was first treated with the iodide, and three weeks later by galvano-puncture, the negative pole being in the sac, and the number of elements (Weiss) increased from five to fifteen. The operation was followed by marked improvement, and was once repeated. The patient lived for nearly four years, pursuing his ordinary avocations, and the sac of the aneurism was found to be largely occupied by a thick, firm material resembling embryonic fibrous tissue. In the second case, also of the ascending aorta, much relief was produced by the iodide and by rest, but the patient died soon after from an intercurrent attack of pericarditis and pneumonia. In the third case all three methods were had recourse to, and galvano-puncture was thrice performed, the needles being connected with the positive pole. The number of elements ranged from three to twenty-two, and each operation lasted about an hour and a half. The tumor, which was of the size of a small apple, ceased to pulsate and became firm, remaining so six months afterwards, when the patient, a female forty-four years of age, was last seen. The fourth case was one of a very formidable character, the aneurism almost filling the left half of the thorax, and being on the point of rupture. In spite of iodide of potassium, morphia, and the application of ice, it continued to increase; and a week after admission galvano-puncture was had recourse to. The needles connected with the positive pole were inserted, five to twenty-nine elements used, and the operation continued for two hours. It was repeated again a month later, when four needles were used, and the current allowed to pass for three hours; and again about three weeks afterwards, when the operation lasted four hours. A fourth galvano-puncture was made within three weeks from the third, but death occurred ten days later. In the remaining two cases the iodide and Tufnell's treatment were employed, in one with great amelioration. Dr. Dreschfeld thinks the cases show the advisability of combining, as far as possible, all three methods of treatment, employing first the medicinal, dietetic, and postural methods, before having recourse to galvano-puncture, which should, however, in no case be long delayed. He has seen no benefit from the subcutaneous injection of ergotin, and thinks that tying the carotid should be restricted to cases of innominate aneurism.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL
OBSERVATION.

A. M. SUMNER, M. D., SECRETARY.

MAY 20, 1878. *The Responsibility of Insane Criminals.*—DR. NORTON FOLSOM read a series of twenty-eight cases illustrating the varying degree of responsibility of insane persons in criminal acts. He remarked that attention had lately been directed, in England and elsewhere, to cases in which the patient, though insane, was considered capable of recognizing the moral and legal relations of the act, and was therefore held responsible. If delusions exist, however, the relations between them and the act may be so subtle as to be beyond sane imagination. There is also great difficulty in estimating the strength of a morbid emotion or the degree of clearness of reasoning in a mind even slightly deficient. Massachusetts courts have decided that a knowledge of right and wrong is not the test to be applied; yet it was laid down as such in a capital case in New York a very few years ago. And though the case did not turn upon this point entirely, the fact remains that a man, manifestly insane, as was testified by eminent authorities; whose disease was so evident that one of his victims had decided, on the day of the deed, that his removal to an asylum was necessary; whose crime was without any sane motive, and was wildly violent and indiscriminating, like many other maniacal homicides; whose delusions and wild conduct before the crime were notorious; and whose apprehensiveness and hallucinations and inimitably insane demeanor after the crime were such as to convince all experts who *saw* him and examined his case in person, was hung, in spite of the recommendation of the jury, and on the advice of the superintendent of one of the largest insane asylums in the country, — a man of good mind but of inordinate self-conceit, who had declined to examine the criminal, but based his advice on some theory of the compatibility of mental disease with legal responsibility. Though misapplied in this case, the doctrine that responsibility *may* exist is a safe one within certain limits; but doubt should be turned in favor of the criminal. In the case of Jesse Pomeroy, the ground was taken at the hearing before the governor and council that responsibility was modified, not abolished. He appeared to be just so deficient that, while he had it in his power to refrain or not from the crime against the boy, his power of estimating the relations — the moral and general bearing — of the act was so lacking as to make it not murder “with deliberate premeditation and malice aforethought,” nor, so far as his mind was concerned, “murder under circumstances of peculiar atrocity.” It was to him a comparatively trivial act. His offense would then be murder in the second degree, which includes all forms beside those just stated. If the view taken is correct, there was an arrest of development in his brain which impaired but did not destroy his responsibility. It is a popular saying that all men are somewhat or sometimes insane. Nothing could be farther from the truth. Certain irregularities in mental action are compatible with health; and a given act may be in one person an evidence of insanity, while in another it can be rationally accounted for. A vagary which is under absolute control and is in

relation with a normal current of thought may resemble the erratic workings of disease, but there is no closer connection. An act is not to be judged of by itself, but its relations to the whole mind must be considered. In health connection can nearly always be traced between trains of thought and action, while in insanity the current is often broken, and processes arise and cease separately. The erroneous popular statement just mentioned may depend partly on a failure to define insanity properly and consider its nature. Most definitions given, indeed, do not make it clear, as they are descriptive or "accidental" definitions. An essential definition separates a phrase from all others, and limits its signification. Insanity is, primarily, *unhealthiness*; secondarily, *unhealthy mental action*; and by still further limitation, *unhealthy mental action dependent on disease or imperfection of the brain*. As we have no other word for it, insanity also means the disease itself, on which the manifestations depend. Much confusion arises from speaking of the functions of the brain as *entities*, or, not much better, as *forces*. It is only by a figure of speech that this is done. Instead of alluding to *the mind, the intellect, the emotions, the memory, the will*, etc., we ought to say that mental action, or cerebration, consists of *perception, intellection, emotion*, and resulting *volition*, with *consciousness* behind or above all. Perception commonly precedes emotion and intellection, but not always. Volition is not carried on alone, but with other functions, and hence there is no insanity of the *will alone*. Insanity is usually first shown in disordered perception and emotion, and intellection is interfered with later. The bad feeling and altered temper precede delusion and disorder of thought. The continuance and the degree of the alteration of these functions produced by disease are essentially different from the deviations observed in health, which are slight and transitory, and there is no common ground between them. — DR. FISHER said that this was a very large subject, and should be interesting. Many of the controversies between lawyers and experts on this subject would be done away with if it were not for the death penalty. In the cases read by Dr. Folsom most of the individuals were clearly irresponsible. It has often been said that as patients are amenable to discipline in asylums they should therefore be responsible to the laws, but such is not really the case, as the asylum exercises a sort of parental discipline, and does not hold patients fully responsible for their acts. The relation of epilepsy to insanity is well known, and yet epileptics and general paralytics are still occasionally sent to prison for acts of violence or theft, and imbecile boys to the reform school. But there is in these cases a chance to redress this wrong by appeal to the proper authority. Dr. Fisher stated that he was frequently called to examine persons guilty of homicide where insanity was alleged or suspected, in whom he found a susceptible state of the brain due to a blow on the head at some former period. Most of these had been under the influence of liquor at the time of the homicide, though not strictly insane, and not excusable on account of intoxication. Such patients are certainly irresponsible at the time. It is customary in some such cases for the court to allow a plea of murder in the second degree, and they are sent to state-prison for life. As a severe blow often produces epilepsy in after years, so a slight blow may produce an explosive or unstable condition of the brain, which shows itself in undue excitability and acts of violence.

JUNE 3, 1878. *Post-Mortem Diagnosis of Certain Forms of Asphyxia.* — DR. F. W. DRAPER read a paper on this subject, which will be published in full.

Small Ovarian Cyst mistaken for Fibroid. — DR. W. H. BAKER related a case where a small adherent ovarian cyst was mistaken for fibroid. — DR. E. G. CUTLER read the following account of the autopsy: On opening the abdomen there was found to be a limited adhesive peritonitis of recent date, involving the peritonæum from just below the umbilicus, the intestines and omentum being tied together quite firmly. There was found to have been old pelvic peritonitis and cellulitis, which bound the uterus, rectum, sigmoid flexure, and ascending colon, also the broad ligament of the left side, into a compact and immovable mass. The left ovary appeared normal. The left Fallopian tube, impervious at the uterus, was dilated to the size of three fingers, and filled with a thin, purulent fluid. It communicated with the sigmoid flexure by an opening about the size of the end of the thumb. Its inner surface was in a state of ulceration. The descending colon, sigmoid flexure, and rectum were filled with a thin, purulent fluid of a very bad odor. The mucous membrane was in a state of extreme ulceration, in some places reaching nearly to the submucous tissue. The right ovary was transformed into a closed sac the size of two fists. It was in immediate apposition to the uterus, and so placed that while in the pelvis it surrounded the latter posteriorly and laterally. The walls were thin and the inner surface presented several small calcareous plates and three or four ulcerating surfaces. The right Fallopian tube, also impervious at the uterus, was likewise dilated, and opened into the right ovarian sac. It was rather more dilated than its fellow. The sac and the tube contained a milky fluid, in which floated plates of cholesterine and granular fat, together with old and fresh pus. The old adhesions were so dense as to give the idea of a solid body, in palpating the right side, until somewhat loosened by incisions. The uterus was of normal length and appearance, except at the cervix, where its mucous membrane was injected and discolored to just within the internal os.

HARRISON ON URINARY DISORDERS.¹

THE author of this volume, having the position of surgeon to the Liverpool Royal Infirmary, has enjoyed unusual opportunities of observing the surgical disorders of the genito-urinary system. At the same time he is by no means inattentive to contemporary medical literature, as is shown by his knowledge of the most recent American contributions to urinary surgery. His book is consequently interesting and instructive. The lectures are clear and concise in style, dealing with their subject matter in the plain, sensible, unpretentious manner which seems characteristic of English medical literature. In them we find no trace of the dogmatic, over-confident, "swaggering" tone which has seemed of late to be becoming somewhat the fashion in clinical teaching in this country. A certain modesty in the expression of individual opinion, of which the high-

¹ *Clinical Lectures on Stricture of the Urethra and other Disorders of the Urinary Organs.* By REGINALD HARRISON. London: J. & A. Churchill. 1878. Pp. 193. Illustrated with Wood-Cuts and Lithographic Plates.

est and most praiseworthy example is to be found in the writings of Sir James Paget, is noticeable in Mr. Harrison's book, and serves, we think, to strengthen rather than to weaken the impression made upon the reader.

Mr. Harrison's views on stricture of the urethra seem somewhat in advance of the opinions generally held in Europe. He is not one of those who think that the recognition and the treatment of stricture, as such, must be postponed until the stage of narrow or confirmed stricture, with manifest obstruction to the passage of urine, has been reached. He fully recognizes the significance of gleet as a sign of incipient contraction. "A gleet," he says, "is to be regarded as indicative of the early formation of stricture. Nay, further, you will not do wrongly in regarding a gleet as the stage in the stricture-forming process when, by your treatment, you can promise your patient to restore his urethra to its normal condition. When a stricture is once allowed to become cicatricial in its character you may palliate or adapt, but you can no more *restore* his urethra than you can by dissection or any other process remove a scar from his skin. You may moderate the inconveniences of a scar, but you cannot obliterate it. Let not, then, the curable stage of stricture pass by; at all events, let the onus of doing so rest with your patient, and not with yourself." Elsewhere, speaking of the symptoms of stricture, he says: "The only outward sign may be a continuous, though slight, muco-purulent discharge. Such a discharge is usually most obvious in the morning, and is often sufficient to glue together the lips of the urethral orifice."

With regard to the management of tight strictures, Mr. Harrison very wisely cautions his readers against the dangers attending the use of small-sized metallic instruments. He mentions a specimen which had come into his possession, showing that "in the hands of an experienced operator a number one metallic bougie had been made to leave the urethra in front of a hard stricture and to reënter it behind the stricture." False passages not uncommonly result from the use of fine probe-pointed metallic instruments. We believe such to be dangerous, even in the most skillful hands. They are, moreover unnecessary, since flexible capillary bougies can always take their place with advantage.

Mr. Harrison is not averse to internal urethrotomy, and has himself invented an instrument for the performance of the operation. His urethrotome is provided with a slender, metallic, probe-like extremity "sufficiently small to pass into the narrowest strictures," which has to be insinuated through and beyond the stricture before the cutting part of the instrument comes into play. When the advance of such an instrument is arrested, it must often be difficult to ascertain whether the obstacle is due to the grasp of the stricture around the bulkier, cutting portion of the instrument, or to the penetration of the probe-like point into the urethral wall. It seems to us to be a much safer and more efficacious plan to use as the *avant coureur* of the metallic shaft either the flexible conducting bougie of the French surgeons, or the long whalebone guide of Van Buren and Gouley. In cases of traumatic rupture of the urethra, Mr. Harrison advocates the performance of perineal section. In this he is at one with Professor Guyon, who advises an immediate resort to that operation in all such cases, even if a catheter can be introduced into the bladder.

With regard to the recognition of prostatic hypertrophy, Mr. Harrison very rightly lays stress chiefly upon the results of catheterism, saying nothing of the rectal examination. It is too little understood that the whole importance of this disorder lies in the disturbance of function which it entails. Unless interfering with the evacuation of the bladder, a large prostate causes no inconvenience and needs no treatment. We cannot quite accept Mr. Harrison's explanation of the impediment to micturition which exists in cases of enlarged prostate, namely, "that the outlet is above the water-level." It is obvious that there can be no *water-level* in the bladder, unless air be contained in it as well as urine. The obstruction is due to the formation of a prostatic outgrowth, which occludes the outlet, acting either as a membranous valve or as a ball-valve. By means of this agency the urethra is plugged, in some cases permanently, in others only until the bladder becomes sufficiently distended to cause the lips of the outlet to be drawn apart.

Among the novelties noticeable in Mr. Harrison's book we find the description of a "pessary catheter" for the introduction of medicated cocoa-butter pessaries, or suppositories, within the bladder. The instrument seems well adapted to its purpose, and its use has, in its inventor's hands, been attended with happy results. "A grain of morphia," he says, "introduced into the bladder in this way and repeated twice in the twenty-four hours has, in several instances, completely and permanently relieved the most distressing symptoms of irritation."

On the whole, Mr. Harrison's book will be found decidedly interesting to the American reader, though the branch of practice of which he treats is one in which American surgery is now taking rather a leading position.

THE STUDY OF HUMAN TESTIMONY, CONSIDERED WITH REFERENCE TO "METALLO-THERAPEUTICS."¹

It is with much pleasure that we have read a series of papers by Dr. G. M. Beard, of New York,² bearing on the above-indicated and kindred subjects. It is time that thinking men should understand, not only in general, but in as strict detail as is possible, what are the principles according to which we should analyze and criticise the popular and scientific delusions which in one form or another are brought almost daily to our notice. It is not enough to adopt the attitude of "skepticism," nor that of so-called "fairness," nor even the "scientific" attitude, if by "scientific" we mean that which is determined by the study of the hitherto accredited sciences alone. For there is in almost every problem concerning popular delusions an element which has been as yet but little studied by scientific men, since its investigation, while belonging in part to both psychology and physiology, has been shunned by the representatives of each of those branches, as belonging more properly to the other.

¹ Vide JOURNAL, vol. xvi., p. 656.

² The Scientific Study of Human Testimony, in Popular Science Monthly for May, June, and July, 1878. A New Theory of Trance, in Chicago Journal of Nervous and Mental Diseases, 1877. How to Experiment on Living Human Beings, in Transactions of American Neurological Association, Chicago Journal for 1878.

This is the element of interaction between the involuntary or sub-conscious life and the conscious, voluntary life. In the acts of all of us the involuntary life plays by far the largest part, but in some persons, and preëminently the whole class of somnambulists, mesmerists, and hysterics, it plays a much larger part, even, than in the rest.

In consequence of the fact that these subjects have as yet been so little studied, there are but few experts in them; that is, there are but few persons who are able to see all sides of these problems without prejudice, and therefore to deal with them deductively, in the light of many kindred facts *studied systematically*; but few to the testimony of whose senses regarding them any great scientific value is to be attached. Broadly speaking, the testimony of the senses of non-experts is of little worth as a basis of exact reasoning. "Facts" are not facts unless we know also the persons by whom, and the circumstances under which, they were observed. The testimony of the man who saw "the sun turn black" would be very different, both as regards matter and significance, from that of one who described an eclipse.

Dr. Beard attempts to arrange and systematize the floating opinions of those most familiar with these matters, and lays down a number of definite rules with regard to human testimony, of which we quote the first:—

I. "The corner-stone of the reconstructed edifice of the principles of evidence must be the recognition of the necessity of the testimony *only of experts*, in all matters of science, and consequent absolute rejection of all testimony of non-experts, without reference to their number or the unanimity of their testimony."

What then constitutes an "expert" in any branch?

In scientific terms he might be briefly defined as a person so familiar with the laws governing the occurrence of any series of phenomena as to be able to apply them deductively in special cases.¹

Practically, we judge at least of the *absence* of expert ability if we find a witness, or experimenter, failing to provide sufficiently against recognized sources of error in an investigation. These sources of error, in cases of experimentation upon living human beings, Dr. Beard classes under six heads: I. "That arising from the intervention of the phenomena of involuntary life, both in the experimenter and the subject experimented on," . . . embracing "all the interactions of mind and body that are below the plane of volition, or of consciousness, or of both. Without a knowledge of this side of physiology scientific experiments upon living human beings is impossible." II. "Unconscious deception on the part of subject experimented on." III. "Intentional deception, ditto." IV. "Unintentional collusion of third parties." V. "Intentional collusion, ditto." VI. "Chance and coincidence."

It is evidently as important that some such scheme as this should be followed, not only in principle but in detail, as that the physicist should note down successively in his experiments the readings of the barometer, the thermometer, etc., without which his experiment might be absolutely valueless.

In the metallo-therapeutic experiments, for example, especially considering

¹ Expertness being, of course, a question of degree, this rule has only a relative significance.

the extraordinary character of the thesis to be maintained, it would be no more than fair to demand: (1.) That the same person should never be experimented on but once in the same manner. (2.) That no results obtained on persons with whom the first could have had intercourse should be considered at all (unless the experiments on them be performed in a different manner). (3.) That the experiments should be performed not by the visiting physician, or by any person likely to inspire any emotion like awe or expectancy in the mind of the patient,—even if not expectancy relative to the exact matter in hand,—but by some indifferent person. (4.) That the examination of the patient should be made without display, incidentally as it were, in order not to arouse “expectant attention.” (5.) That control experiments of every kind should be made. How little these restrictions were observed by Charcot, every one conversant with the subject must have noticed. Westphal, on the other hand, took up several of them, with results which from the stand-point of this paper are damaging to the position of the metallo-therapeutists, though from the stand-point of the natural sciences they were not so regarded, which is a significant point as illustrating (if the views here maintained are just) the fact that men distinguished in one branch of science are not necessarily competent, often, indeed, necessarily incompetent to deal with problems belonging in another branch. On these grounds we believe that Professor Charcot, great and acknowledged genius as he is, is not to be regarded as an expert in the department of science which deals with these problems, at once psychological and physiological (a department which is as yet in its infancy), and that, since the entire investigation owes its life to the force given by his name, its reputation, too, must be regarded as impaired by the same arguments. Of course all that has been claimed in the way of results may still be true, but as yet we have seen no proof that the phenomena described are due to electric action, or even to cutaneous irritation, unless acting indirectly, instead of being phenomena analogous to or identical with those of “trance” (as defined by Dr. Beard), while at the same time, with Charcot and Westphal, we would expressly vindicate the *imagination* of the patients from all blame. Until such proof is forthcoming we remain at liberty to suspect that it is another case of “Perkins’s tractors” with which we have here to deal. In either case, Dr. Beard’s papers are of great value as succinctly defining the nature of the criticisms with which such claims should first of all be met, and of making an important contribution towards our knowledge of a department of physiology hitherto almost unstudied by scientific men.

For those desiring to consult further the literature of metallo-therapeutics we append the following references: *London Lancet*, No. 3, et seq., 1878. (Lecture by Charcot.) *Gazette hebdomadaire* and *Progrès médicale* for 1877 and 1878. (Vide Gen. Index, art., Metallo-Therap., and also under Soc. de Biologie.) *Berliner klinische Wochenschrift*, July 29, 1878, March 11, 1878. (Papers by Westphal and Bernhardt.) *Brit. Med. Journal*, July 20, 1878. (Obs. from Wilks’s Clinic.) Vide also other English papers of 1878, for occasional notes. *Philadel. Med. Times*, April 13, 1878.

A NATIONAL BOARD OF HEALTH.

WHILE we are taking a decidedly long step backward, in Massachusetts, in matters relating to the public health, and no one apparently knows just how the new board is to be built up to take the place of the two which it is proposed to throw down, it is a great satisfaction to find that rational views have prevailed in Washington, that the senate ultra-quarantine bill has been rejected, and that the house bill of Mr. McGowan has passed, and has become law by the approval of the president March 3d.

The act provides for a board of seven, to be appointed by the president, subject to the approval of the senate, to whom are to be added one medical officer of the army, one medical officer of the navy, one medical officer of the marine hospital service, and one officer from the department of justice, to be detailed by the secretaries of the several departments and the attorney-general, respectively. The president of the board is to be elected by its members. The duties of the board are to be "to obtain information upon all matters affecting the public health; to advise the several departments of the government, the executives of the several States, and the commissioners of the District of Columbia on all questions submitted by them, or whenever in the opinion of the board such advice may tend to the preservation and improvement of the public health." Provisions are made for a full statement of transactions, etc., to Congress, together with a plan for a national health organization, which shall be submitted after consultation with sanitarians and boards of health. The liberal sum of fifty thousand dollars is appropriated for salaries, and five hundred thousand dollars besides, or as much as "may be found necessary to carry out the purposes of the act."

We congratulate the country on this result. But the beginning to be made is vitally important, for everything depends upon the men selected for the members of the board. No end of "bummers" will apply; let us hope that *every applicant will be passed by*, and that only first-rate men will be appointed, — men to honor the place rather than to be honored by it. We miss in the act an excellent proviso of the bill providing for coöperation with state boards of health and quarantine authorities, with power to pay part of the expenses of such joint work, but that can easily be added in the future.

NEW YORK TENEMENT HOUSES.

NEW YORK has at last awakened to an appreciation of the evils of the great tenement-house system which has so long cursed the community, and to the imperative necessity of taking some active measures for its reform. One Sunday in the latter part of February the clergymen of all denominations were requested to speak upon the subject, and in the evening public meetings for its discussion were held in two of the principal churches, at which appropriate addresses were made by a number of prominent clergymen, physicians, and other public-spirited citizens. As a result of this agitation a grand mass meeting was held at the Cooper Institute on the evening of February 28th, which was presided over by the mayor, and at which the sanitary, moral, political, and

financial aspects of the question were considered by such speakers as Parke Godwin, Dr. E. L. Shape, of the State Charities Aid Association, Frederick R. Coudert, Jackson S. Schultz, Joseph H. Choate, and Rabbi Henry S. Jacobs. In order that a practical result might be accomplished, the chair was empowered to appoint a committee for the purpose of devising measures to carry tenement-house reform into effect, and among the gentlemen named by the mayor were representatives of the Astors, Vanderbilts, and other large capitalists.

In this connection it is interesting to note the opinion of the committee of award in the competition for the best plan for a tenement house to be constructed on an ordinary city lot, as expressed in their report, just given to the public. "The object of the competition," the report says, "was to demonstrate if it is possible to build a model house for workingmen on the existing city lot, twenty-five by one hundred feet; and while the plans selected come nearest to fulfilling the terms of the competition, the committee emphatically declare that in their view it is impossible to secure the requirements of physical and moral health within these narrow limits. Nevertheless, the plans are an improvement on the existing tenement." It would seem, therefore, to be an absolute impossibility to plan a house for such a lot, with accommodations for four families on a floor, which will meet in a satisfactory manner the requirements demanded, and that a radical change must consequently be made in the arrangement of building lots for such purposes. The first prize in the above competition was awarded to James E. Ware, of New York, and three other smaller prizes were also given.

Prof. Charles F. Chandler, president of the board of health, recently delivered an instructive lecture on Sanitary Science and Public Health at the Anthon Memorial Church, it being one of a course of free lectures there which is at present attracting considerable attention on the part of the public. In the course of it he stated that fifty-three and fifteen hundredths per cent. of deaths in the city occur in tenement houses proper, and as the public institutions get almost all their patients from them, over sixty-nine per cent., or more than two thirds of the total number of deaths, occur among the tenement-house population. In speaking of the subject of infant mortality, Professor Chandler claimed that over twelve thousand lives had been saved in New York by reforms that had been effected during the last four years.

MEDICAL NOTES.

—With very great pleasure we learn from Washington that Congress has made an appropriation for the first two volumes of the Medical Index, and that Dr. Billings can now proceed with its publication.

—The presidential chair of the Zoölogical Society of London having hitherto been occupied by aristocratic Fellows of the society, the *British Medical Journal* congratulates the members of the society upon the recent election of Prof. W. H. Flower, "the distinguished anatomist, surgeon, and zoölogist," as president. — Dr. John Macrobine, emeritus professor of the theory and practice of medicine in the University of Aberdeen, is dead.

NEW YORK.

—The reports for the last two weeks show a decided diminution in the number of cases of scarlatina, and that there is now comparatively little diphtheria in the city.

—The commencement exercises of the Bellevue Hospital Medical College were held in the Academy of Music on the afternoon of February 27th, and the graduates numbered one hundred and sixty-five. The address to the graduating class was by the Hon. Richard O'Gorman, one of the most graceful orators of the New York bar, and the valedictorian was Hubert Haywood, of North Carolina. On this occasion a prize of two hundred dollars, offered some time ago by Professor Sayre for the best essay on The *Ætiology and Pathology of Pott's Disease of the Spine* by a graduate of the Bellevue school, was awarded to Dr. Seth D. Williams, of New Hampshire.

—The seventy-second commencement of the College of Physicians and Surgeons came off on the following evening at Steinway Hall, and, curiously enough, there were just seventy-two graduates. The address to the class was made by Prof. Roswell D. Hitchcock, of the Union Theological Seminary, and the valedictory address by William F. Wright, of the graduating class. In announcing the various prizes Professor Markoe stated that none of the essays which had been received sufficiently complied with the requirement of containing the results of original investigation to merit the Stum triennial prize. The subjects for 1882 would be Lesions of the Brain, and Diphtheria in its Relations to Membranous Croup, the prize being open to universal competition. Dr. Wm. H. Draper likewise announced that no award had been made for the alumnus prize of five hundred dollars. Six essays had been handed in, but while four of them were of a high order of merit, none of them were considered sufficiently excellent to constitute "a substantial contribution to medical knowledge," as required by the terms specified by the founder of the fund. The prize is consequently to remain open for competition until 1880. For some time past the faculty of this school have been increasing the strictness of the examinations for degrees, and in his address Professor Hitchcock stated that of the one hundred and twenty candidates for graduation this year eighteen had been conditioned, with the privilege of presenting themselves again in six months, and thirty had been entirely rejected. After the present year the ten honor men of each graduating class will have the opportunity of competing at a public examination for three prizes of five hundred, three hundred, and two hundred dollars, respectively, the money to be furnished by a bequest of the late Dr. Jacob Harsen.

—At the meeting of the Medico-Legal Society, March 5th, a paper by Dr. Wooster Beach on Inspection of the Dead was read, in which the writer expressed the opinion that no person who dies in a large town or city should be buried without his body being subjected to an inspection by a properly qualified officer: on the grounds that without some system of this kind many crimes are liable to remain undiscovered, and that by such a system death in every case would be verified, so that the consignment of a living person to the grave would be impossible. The medical man who certifies to a death was, he said, liable in many obscure cases of poisoning to be mistaken as to the cause of

death. Inspection of persons dead under these circumstances by an officer whose knowledge and training fully fitted him to collect and properly weigh the evidence would, in the majority of instances, set the question of the existence or absence of crime at rest in a very short time. If a so-called physician were now a party to or cognizant of the crime he might, under the present system, furnish a false certificate of death, with scarcely any chance of its being detected. Proper official visitation of the dead would also reveal a great many cases in which death is directly attributable to gross ignorance on the part of so-called physicians. At the same meeting a committee was appointed, with Dr. R. J. O'Sullivan as its chairman, to coöperate with the State Medical Society in its efforts to secure the enactment of a law to prevent the adulteration of food and medicine.

CHICAGO.

—The college commencements are over; Rush College graduated one hundred and twenty-one, with the regular degree, the Chicago College thirty-five, and the Woman's College five. At the close of the session of Rush the faculty entertained the alumni at a banquet at the Tremont House. The occasion was taken advantage of to reorganize the alumni association, which since the great fire of 1871 has not been in active existence.

—At the close of the session of the Chicago College the usual alumni reunion was held, with a banquet, at the Palmer House. At this gathering a subscription was started to raise funds to equip a physiological laboratory for the college. Quite a sum was realized. Dr. Senn, of Milwaukee, announced his offer of an annual prize of one of the best standard works on surgery to that student or alumnus who should make the best anatomical preparation for the college museum. Dr. C. W. Earle, of Chicago, announced a similar prize for the best essay on the diseases of children.

PHILADELPHIA.

—Prof. Alfred Stillé, who has been connected with the University of Pennsylvania for the past fifteen years, has just resigned the chair of theory and practice of medicine and of clinical medicine in that institution.

—Dr. John H. McQuillen, dean of the faculty and professor of physiology of the Philadelphia Dental College, died suddenly on the 3d instant, at the Academy of Natural Sciences, while preparing for a lecture. He was alone at the time, and death was attributed to heart disease. He was a graduate of Jefferson College, and was formerly a member of the faculty at the Pennsylvania Dental College, from which he withdrew in 1863 to found the new institution, which soon took a position in the front rank of American dental colleges. He was also editor of the *Dental Cosmos*, and at the time of his death was president of the American Dental Association, of the Pennsylvania State Dental Association, and of the Odontographic Society of Pennsylvania. He was also chairman of the microscopical section of the Academy of Natural Sciences.

—At the commencement of the University of Pennsylvania, on the 13th inst., the faculty will wear the "gown and cap" that the medical department discarded many years ago.

— A woman, thirty-four years of age, died at the house of correction from taking a mixture of chloral and camphor intended for external use. She became thoroughly narcotized, and died comatose in about eighteen hours. She had a cirrhotic liver, and took the mixture to satisfy a craving for drink.

— The young male chimpanzee at the Zoölogical Garden did not long survive his companion, and is now being dissected by Professor Leidy. At a recent meeting of the Academy of Natural Sciences the results of the examination of the female (which died some weeks since) were presented, showing, however, some important points of difference between the brain of that animal and the one now being studied.

Dr. Chapman reported that the brain of the animal under his examination closely resembled that of a human being, with the exception that the cerebrum did not cover the cerebellum. Dr. Leidy, on the other hand, finds that in the case of the male chimpanzee the brain of the animal more nearly resembles the human structure, and that the cerebellum is covered by the cerebrum, indicating greater intellectual power in the male. He inferred that the present was the only case on record in which an anatomical examination of a male chimpanzee had been made.

Another striking difference in the anatomy of the male and female is a most remarkable peculiarity in the formation of the vocal organs of the male. This consists of a natural bagpipe, which communicates with the larynx, extending to the breast and into the armpits. It is covered by powerful muscles. To produce a loud sound but a slight motion of the arms was necessary. In discovering this singular physical arrangement the professor wrote to the superintendent of the Zoölogical Garden to inquire if the male chimpanzee had any distinctive call or cry, to which the superintendent replied that the "voice of the male for so young an animal was simply enormous; its cry when enraged was loud, piercing, and shrill." It is a well-known fact that this vocal arrangement is also found in the male gorilla, the ourang-outang, and the howling monkeys of Southern Africa, whose cry can be heard for miles.

It was stated that the bowels of the animal were empty and contracted, as if it had been starved, but that the general fatty condition of the body showed that this was not the case. Otherwise the bowels were in a healthy state. The lungs have not been examined as yet, and the cause of death has not been ascertained. The body of the animal will be preserved, and will be placed in the University Museum. Dr. Leidy will shortly submit the result of his examination in a paper to be presented to the Academy of Natural Sciences.

UNITED STATES MARINE HOSPITAL, PORT OF BOSTON.

J. B. HAMILTON, M. D., SURGEON IN CHARGE.

NOTES OF SEVEN CASES IN WHICH THE ASPIRATOR WAS USED DURING
THE YEAR 1878.

Hydrothorax. — S. W., aged twenty-four, native of Delaware, mate of steamer Panther, was admitted May 3, 1878, with a history of acute pleurisy and the physical signs of effusion. His tongue was brown and dry, his pulse 100,

and he was deeply jaundiced; there was dyspnœa, which increased until May 6th, when 2944 cc. (92 f $\bar{3}$) of clear serum were withdrawn by aspiration. The removal of this fluid was followed by immediate relief from the dyspnœa, but a severe cough continued at intervals throughout the night; on May 11th, the sac having refilled, 2080 cc. (65 f $\bar{3}$) of pea-green serum were withdrawn by the aspirator; from this time he rapidly became convalescent, and was discharged, apparently well, June 12, 1878.

Hydrarthrosis. — S. B., aged twenty-four, native of Massachusetts, was admitted April 16, 1878, from the schooner F. L. Porter, with dropsy of both knee-joints, resulting from rheumatism. The acute stage having passed, and his general condition being favorable, a large-sized needle was introduced into the right knee-joint, but the fluid would not flow, notwithstanding the vacuum was apparently as perfect as could be produced by the aspirator. The needle was then removed, the skin strongly retracted from one side, a small incision made into the synovial sac, and a canula inserted; 256 cc. of serum, with loose flocculi, flowed out through the canula. The knee was tightly bandaged, and on April 30th had entirely recovered its normal appearance. It was then decided to operate upon the other knee in a similar manner, which was done, and 160 cc. of fluid were evacuated. No untoward result followed the operation, and the patient was discharged, walking without lameness or difficulty, May 15, 1878.

Effusion into the Joints from Acute Rheumatism. — H. W., aged forty-one, mulatto, entered June 28, 1878, from the schooner Emma D. Shaw with acute rheumatism. There was swelling and pain in the wrist, shoulder, ankle, and knee joints, and salicylate of soda was freely administered, which in a few days was followed by counter-irritants, and on the 10th of July a blister was placed over the left knee-joint. The effusion in the joint remained undisturbed, and July 14th 36 cc. of serum were withdrawn by aspiration. July 19th the knee was apparently well, and the man was able to walk about the ward. The pain became severe in the left shoulder-joint, and he was put upon tincture of colchicum root, and the joint was blistered. Although the symptoms somewhat subsided he was still unable to use the arm, and on the 12th of August fluctuation was detected in the joint. An exploring needle was introduced, and a little serum escaped; 32 cc. of serum were withdrawn by aspiration on the 13th, and the patient speedily recovered the use of his arm. He was discharged, August 19th, convalescent.

W. V., aged twenty-three, negro, entered August 19, 1878, from the schooner F. L. Godfrey, with swelling, pain, and effusion in the left knee-joint. There was no history of rheumatism, and the case seemed to be one of synovitis. On August 20th he was etherized, and 96 cc. of serum were withdrawn from the joint by aspiration; there was no pain in it the next day, but in a few days the symptoms of general rheumatism supervened; the tendo Achillis, the soles of his feet, and his wrists became very painful. Although this patient remained in the hospital until October 10, 1878, the joint aspirated gave him no pain or further trouble.

Effusion in Knee-Joint from Synovitis. — A. J., aged twenty-three, negro, was admitted August 6, 1878, with an effusion in the left knee-joint which had

resulted from previous synovitis; there was no active pain, but the swelling prevented the proper motion of the knee, and in walking some pain and considerable lameness were present. On August 14th 96 cc. of serum were withdrawn by aspiration, and on August 17th he was discharged, apparently recovered.

Retention of Urine.—S. R. T., aged twenty-nine, a native of Maine, entered July 2, 1878, from the schooner *Mary E. Long*, suffering from stricture of the urethra. The stricture was very tight, and there were several false passages; he stated that an operation had been performed two years previously. On the 5th of July a filiform guide was successfully passed, a dilator attached, and the stricture ruptured by divulsion. The patient was placed in bed, and morphia .032 gm. administered at ten A. M. An hour later, being unable to urinate, he commenced screaming with pain, and was immediately placed in a warm bath. At one P. M. .032 morphia was again administered, and he was kept in the bath. At three P. M., the symptoms having increased in severity, and it having been found after repeated trials impossible to pass a catheter, 960 cc. of urine were withdrawn by aspiration (suprapubic). There was instantaneous relief, and the patient almost immediately fell asleep.

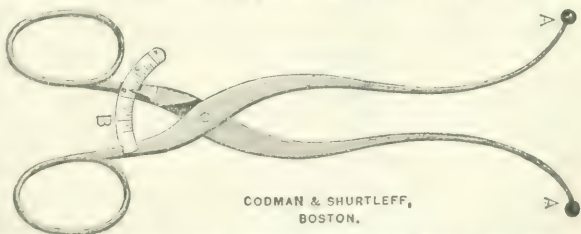
The next day he urinated without difficulty, and on the 11th a No. 12 French bougie was passed into the bladder; this was followed by a chill and urethral fever, but no retention. On the 19th the same sized bougie was passed without difficulty, and on the 22d he was discharged, "improved," but he declared himself perfectly well, and two months subsequently called at the city office to say that he still felt well, and was able to pass a large, full stream of urine.

SHORT COMMUNICATIONS.

DR. BAKER'S VAGINOMETER.

THIS is another of those convenient instruments which are intended to assist the general practitioner in certain processes which are frequently supposed to be successful only in the hands of specialists, and to give to the specialist himself a facility and accuracy which other cruder means fail to secure. As the name implies, it is an instrument for measuring the vagina, having special reference to the adjustment of pessaries. It consists of two blades, armed at their extremities with small, hard-rubber buttons, A A, and having attached to the handles an indicator, B, so graduated as to tell the distance between the two points when opened.

Armed with this instrument, the physician can with very simple measurements find the size of the pessary needed, and avoid the mistake of getting it so small that it will not stay in place, or so large that it will cut into the walls of the vagina. Instead of writing to the instrument maker, "Send me an anteversion pessary, medium size," or "a retroflexion pessary, such as you consider best," or, with a vague idea of the size of the particular vagina, making a visit to the instrument maker and being confused by the number and variety to choose from, one or two simple measurements with this instrument are all that are needed to give a definite idea of what is required.



CODMAN & SHURTLEFF,
BOSTON.

The distance from the highest point to which we can push up the anterior or posterior cul-de-sac, as the case may be, on the body of the uterus, to the junction of the lower and middle thirds of the urethra (a point corresponding to the strongest part of the perineal body), will be the length of the pessary. This is easily measured by the finger, but accuracy here is of less importance than in the lateral dimensions, for, the vagina being distensible upwards, a slight difference will not show itself by pressure on the vaginal walls.

With the width it is different. Here it is of the utmost importance to avoid pressure, as the vagina, being attached to the rami of the pubes, does not permit of any lateral distention. The distance between the rami, measured easily without exerting any pressure, will be the width needed, and this can be accurately measured by the vaginometer, and conveniently read off *in situ*. The proper curve cannot be determined by direct measurements, but must be given to suit the individual case.

Of course, the practitioner who has had large experience will have an "educated touch," and will not feel the need of an instrument like this, but the one who only now and then has such a case to treat will be glad to avail himself of it.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 1, 1879.

Cities.	Popula- tion estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from					
				The Princi- pal Zymo- tic Diseases.	Pneumo- nia.	Diphtheria and Group.	Scarlet Fe- ver.	Diarrhoeal Diseases.	
New York.....	1,085,000	600	28.83	18.50	12.33	5.50	7.33	2.00	
Philadelphia.....	—	308	—	—	—	—	2.93	—	
Brooklyn.....	564,400	212	19.58	16.04	16.04	8.49	4.72	0.47	
St. Louis.....	—	105	—	11.43	8.57	4.76	0.95	—	
Chicago.....	—	126	—	21.43	8.73	9.52	5.55	—	
Baltimore.....	365,000	145	20.71	14.48	15.86	7.58	2.07	0.69	
Boston.....	356,500	145	21.21	19.31	12.14	13.10	1.38	1.38	
Cincinnati.....	—	107	—	26.17	7.48	3.74	16.82	0.94	
District of Columbia.....	160,000	92	29.96	11.95	20.65	2.17	5.44	4.34	
Pittsburgh.....	—	52	—	7.65	15.30	7.65	—	—	
Milwaukee.....	—	37	—	24.32	16.22	16.22	2.70	—	
Providence.....	101,000	53	27.35	5.66	15.09	3.77	—	—	
New Haven.....	—	20	—	5.00	20.00	5.00	—	—	
Charleston.....	—	27	—	3.70	14.81	—	—	—	
Lowell.....	53,300	22	21.52	13.64	—	—	—	—	
Worcester.....	52,500	9	8.94	22.22	—	22.22	—	—	
Cambridge.....	51,400	18	18.25	11.11	11.11	5.55	5.55	—	
Fall River.....	48,500	—	—	—	—	—	—	—	
Lawrence.....	38,200	14	19.11	21.43	—	7.14	—	—	
Lynn.....	34,000	10	15.34	20.00	10.00	20.00	—	—	
Springfield.....	31,500	13	21.52	30.77	23.08	7.70	15.40	—	
New Bedford.....	27,000	—	—	—	—	—	—	—	
Salem.....	26,400	7	13.33	—	14.29	—	—	—	
Somerville.....	23,350	7	15.63	—	14.29	—	—	—	
Chelsea.....	20,800	6	15.04	16.67	50.50	16.67	—	—	
Taunton.....	20,200	2	5.16	—	—	—	—	—	
Holyoke.....	18,200	4	11.46	25.00	25.00	25.00	—	—	
Gloucester.....	17,100	6	18.29	33.33	—	33.33	—	—	
Newton.....	17,100	4	12.20	—	25.00	—	—	—	
Haverhill.....	15,300	9	30.67	33.33	—	33.33	—	—	
Newburyport.....	13,500	9	34.76	—	—	—	—	—	
Fitchburg.....	12,500	—	—	—	—	—	—	—	

Two thousand one hundred and sixty-nine deaths were reported: 271 from consumption, 239 from pneumonia, 103 from scarlet fever, 85 from diphtheria, 84 from bronchitis, 50 from croup, 28 from whooping-cough, 23 from typhoid fever, 21 from diarrhoeal diseases, 14 from erysipelas, 12 from cerebro-spinal meningitis, none from measles or small-pox. The increase in the total mortality is slight; from pneumonia and bronchitis very great; from erysipelas considerable; from scarlet fever, cerebro-spinal meningitis, diphtheria, and croup slight. There is a marked decline in the mortality from consumption; from whooping-cough, typhoid fever, and diarrhoeal diseases, a slight reduction.

From *bronchitis*, 35 deaths were reported in New York, 11 in Brooklyn, eight in Cincinnati, seven in Pittsburgh, six in Chicago and St. Louis, five in Baltimore, two in Providence and New Haven, one in District of Columbia and Charleston. From *whooping-cough*, 15 in New York, four in Brooklyn and Cincinnati, two in Baltimore and Boston, one in Chicago. From *typhoid fever*, eight in Philadelphia, three in Chicago, two in New York, Boston, and Pittsburgh, one in Baltimore, Cincinnati, Milwaukee, Providence, Charleston, and Lowell. From *erysipelas*, five in St. Louis, four in New York, two in Lowell, one in Brooklyn, Chicago, and Baltimore. From *cerebro-spinal meningitis*, three in Chicago, two in Baltimore and Lawrence, one in New York, St. Louis, Boston, Milwaukee, and Springfield. There was one death from *trismus nascentium* in the District of Columbia, where the death-rate among the whites was 24.04, colored 41.40. There is a marked prevalence of measles in Pittsburgh and Cleveland. In St. Louis there was a sudden increase in erysipelas and puerperal peritonitis. Nashville, Norfolk, Louisville, Mobile, and Savannah remain very free from zymotic diseases. Scarlet fever was prevalent in Cleveland, Buffalo, and Richmond; diphtheria in Cleveland, Rochester, and San Francisco; typhoid fever in Buffalo; and acute pulmonary diseases generally, except in the extreme Southern cities. The returns from fifteen of the nineteen cities of Massachusetts, with a population of 789,350, showed an increased mortality from diphtheria, croup, and typhoid fever; about the same from cerebro-spinal meningitis and diarrhoeal diseases; diminished from the other "zymotic" and from pulmonary diseases.

Sergeant Pursell's meteorological record for the week, in Boston, is as follows:—

Date.	Barom-eter.	Thermom-eter.		Relative Humidity.			Direction of Wind.			Velocity of Wind.			State of Weather.			Rainfall. (Melted Snow.)			
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Daily Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration in Hours.	Amount in Inches.
Feb. 23	29.613	32 46	19 86	28 70	61	W	S	S	6 6	12	F	F	C	—	—	—	—	—	
" 24	29.881	18 36	14 65	58 76	67	W	W	W	12 17	10	C	C	C	—	—	—	—	—	
" 25	30.105	21 30	10 60	41 88	63	N	SE	E	3 10	10	F	O	S	—	—	—	.35	—	
" 26	29.830	42 56	22 100	80 92	90	O	W	SW	0 22	17	G	C	C	R	—	—	.42	—	
" 27	30.365	19 33	10 38	50 48	63	W	NW	NW	13 16	15	S	C	C	R	—	—	.12	—	
" 28	30.787	13 21	4 77	54 84	65	NW	NE	N	16 4	4	F	F	C	—	—	—	—	—	
March 1	31.524	26 34	7 61	52 68	60	N	S	SW	2 8	10	F	F	C	—	—	—	—	—	

Weekly Summary.	Barometer.	Thermometer.	Humidity, Saturation being 100.	Wind.	Rain.
	Mean 30.151	Mean 24.9	Mean 67.3	Total miles traveled, 1625.	Total amt. 1.89 in.
	Max. 30.820	Max. 56	Max. 100		
	Min. 29.542	Min. 4	Min. 9	Prevailing direction, W.	Duration, 15 hrs. 55 min.
	Range 1.278	Range 52	Range 91		

Barometer corrected for temperature, elevation, and instrumental error.

Explanation of weather symbols: O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., snow; L. S., light snow; T., threatening.

Station: Latitude 42° 21'; longitude 71° 4'; height of instrument above the sea, 77.5.

For the week ending February 8th in 148 German cities and towns, with a population estimated at 7,548,371, the death-rate was 26.6, an increase of .8 from the previous week. In general, of the "zymotic" diseases only whooping-cough and typhus fever had increased; the others had diminished. Measles were more prevalent in Nuremberg and Frankfort-on-the-Main; scarlet fever in Berlin, Hamburg, and Leipsic; diphtheria was less prevalent and of milder type, although locally more fatal in Berlin, Königsberg, Leipsic, Dresden, and Strasburg; typhoid fever showed an increase only in Munich, — elsewhere a great decrease; typhus has very much increased in Berlin, but the epidemic in Konitz and Thorn is about over; diarrhoeal diseases had become less prevalent, except in Munich. Pulmonary

diseases are widely prevalent and quite fatal. In the 148 cities and towns 626 deaths were reported from consumption, 499 from acute pulmonary diseases, 159 from diphtheria and croup, 139 from diarrhoeal diseases, 78 from scarlet fever, 71 from whooping-cough, 41 each from typhoid and puerperal fevers, 30 from measles, seven from typhus fever, and none from small-pox. The death-rates ranged from 40.5 in Görlitz to 12.9 in Lübeck; Dantzic 30.6; Kiel 19.8; Breslau 27.2; Munich 36.2; Stuttgart 21.2; Augsburg 32.8; Dresden 22.0; Cassel 34.0; Erfurt 16.9; Berlin 24.4; Leipsic 32.8; Hamburg 27.3; Hanover 23.1; Bremen 20.6; Cologne 31.7; Frankfort-on-the-Main 21.8; Wiesbaden 31.0.

Small-pox and typhus fever are prevalent in Poland; small-pox was diminishing in London, Budapesth, Paris, and St. Petersburg, and increasing in Vienna, Barcelona, and Dublin; only a few deaths occurred from it in Prague, Trieste, Geneva, Lisbon, and Warsaw.

There is no further spread of the plague, and cases are reported only in the extreme southeastern portion of the quarantine district, although severe typhus fever and diphtheria prevail in Kiew and Tschernigow. In Roumania, Servia, France, Italy, England, Spain, Greece, Russia, and the United States precautionary measures have been taken to prevent the introduction of the plague.

THE METRIC SYSTEM IN MEDICINE.

OLD STYLE.	METRIC.
	Gms.
℥i. or gr. i. equals	06
f℥i. or ℥i. equals	4
f℥i. or ℥i. equals	32

The decimal line instead of *points* makes errors impossible.

As .06 (Drug) is less than a grain, while 4. and 32. (Vehicle) are more than the drachm and ounce, there is no danger of giving too large doses of strong drugs.

C. C. used for Gms. causes an error of 5 per cent. [excess].

A teaspoon is 5 Gms.; a tablespoon, 20 Gms.

BOOKS AND PAMPHLETS RECEIVED. — The National Dispensatory. By Alfred Stillé, M. D., LL. D., and John M. Maisch, M. D., Ph. D. Philadelphia: Henry C. Lea. 1879. 8vo. Pp. 1628.

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On the Treatment of Chronic Catarrh of the Bladder. By Theodore Deecke, M. D. Utica, N. Y. (Reprint.)

A Case of Inflammatory Fungoid Neoplasm. By Louis A. Duhring, M. D. (Reprint.) Philadelphia: J. B. Lippincott. 1879.

Yellow Fever. By Thomas O. Summers, M. D., Professor of Anatomy and Histology in the University of Nashville and Vanderbilt University. Nashville, Tenn.: Wheeler Brothers. 1879.

Memorial of Dr. John E. Tyler. By J. P. Bancroft, M. D.

In Memoriam. Dr. Landon R. Longworth.

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LECTURES.

BOSTON CITY HOSPITAL: CLINICAL LECTURE NO. XII.

BY DAVID W. CHEEVER, M. D.,

Professor of Clinical Surgery in Harvard University.

Spina Bifida. — GENTLEMEN: Our first patient to-day is the infant child shown you on Friday last, at which time, on account of the great risk involved, we concluded that it would be best not to do anything surgically. Meanwhile, however, the parents have expressed such an earnest desire that I would undertake some means of relief that I have consented to make the attempt. We have here an infant three months of age, strong, vigorous, and healthy, but having at the lower end of the spine a peculiar tumor of soft and fluctuating character. This condition is probably what is known as spina bifida, and due to non-union of the lower portion of the spinal column. You may perhaps think this lack of development is not found elsewhere, but in the front of the head we sometimes see open sutures, and in consequence a hydrocephalus; secondly, meningocele occurs when the sutures at the back of the head fail to close, and the brain hangs out in a shape similar to that of the "waterfall" worn by women. The same failure of development may be seen in the back of the neck, and in various portions of the spine lower down. But we oftenest see it here, where the lumbar vertebræ fail to coalesce. This tumor is of course due to dilatation of the membranes of the spinal cord, and incloses the terminating fibres, the cauda equina. Hence if we cut it open and attempt to remove it we are in danger of destroying some of these fibres. The fluid which fills the tumor is the cerebro-spinal fluid. If we draw it off the tumor will fill again; if we repeat the operation the sac may refill, and so on without limit. Not long ago we had in the hospital a boy with a gun-shot wound of the spine, which discharged the cerebro-spinal fluid in such quantities that bedclothing and mattress were drenched, and the boy died from exhaustion and spinal irritation. Now, the question is, Can we safely meddle with this tumor? Some time since a child which had spina bifida, with an opening leading up into the spinal canal, was brought into the hospital for treatment. The sac was ruptured in birth, a few

hours before. We could do nothing more than close the opening with plaster and compress, and the child died in forty-eight hours. Another question is, Can we do any good by injecting a stimulating fluid into the sac, as in hydrocele? Perhaps. But the procedure is liable to be followed by meningitis; still, this is what I propose to do. The strength of the injection will be only four drops of the tincture of iodine to one drachm of water, the fluid is therefore very mild. In hydrocele we should use a tincture of iodine of the full officinal strength. After injecting the fluid we shall apply pressure and watch the child carefully.

In some cases repeated tapplings have been followed by shrinking of the sac. I aspirate the tumor, and you see the clear cerebro-spinal fluid, three drachms in quantity, which we will save for chemical and microscopical examination. I now inject into the sac one half drachm of water, which contains two drops of the tincture of iodine. We shall next apply compression as well as we can in this locality, which in children is an awkward place for such an application. To me this is a case of great interest, for I have never before done the operation, and as I said before I do it now only at the earnest solicitation of the parents. A certain number of cases of spina bifida recover. I have myself seen one or two such instances. Some years ago, in the dispensary, I had as a patient a little girl whose chest it was necessary to examine. After her clothing had been removed I noticed over the sacrum a peculiar, puckered scar into which I could put my finger. I found that the arches of the vertebræ had not united. The child was born thus, and had a large tumor. At four years of age she fell and ruptured the sac, in consequence of which she was very sick for a fortnight. Pus formed, and an abscess followed, but healed, and the child recovered with no loss of power in the limbs. The tumor was in a favorable location, namely, at the lower end of the spine, and contained only the fibres of the cauda equina.

The other day the parents of this child were told by parties outside the hospital that it would never grow, or if it did it would be good for nothing. But I remember having seen a case at maturity in very good condition. The individual had spina bifida, with a tumor as large as a child's head hanging away from the body, but supported by elastic bands, and doing well. Dr. Thorndike mentions a similar case, but these, of course, are exceptions. Commonly, the tumor continues to enlarge, the patient loses power in the legs, some slight accident sets up a cerebro-spinal meningitis, and the child dies. Statistics show that many cases die from the effects of operation. Some, however, recover, either spontaneously or as a result of a stimulating injection. But our case is an unfavorable one for operation. The child is strong, is nursed by the mother, and so has good food, but the tumor has no neck, and is connected with the spinal cavity by means of a large opening, and there-

fore inflammation can easily run up the spinal canal. We cannot remove the tumor, nor do anything else than what has been done. In some cases pedunculated tumors have been removed by ligature, which caused them to slough off. We have, then, only three modes of operation: First, tapping. Secondly, constant pressure, which in so young a child it is almost impossible to apply. In a child five or six years old, however, who is able to control the sphincters, we might apply a pad and elastic bandage, and the treatment would have fair promise. Thirdly, we may inject iodine, as has been done in this case, after drawing off a portion of the fluid in the tumor, and the result may be good. If moderate inflammation be excited and the tumor do not disappear at the end of a week, I shall repeat the operation. Dr. Thorndike suggests that painting the tumor with collodion will aid in the shrinking, which we hope will take place. Now if the case go badly and inflammation extend up the spine, there will be twitching of the limbs and convulsions, and probably the inflammation will rush up the meninges (the delicate membranes which line the spinal canal and the cerebral cavities) with the same intensity as in the development of peritonitis, in which the inflammation is so rapid that it spreads like a blush upon the cheek. We then should have cerebro-spinal meningitis. If the child be alive to-morrow it will probably do well.

In a small proportion of cases hydrocephalus and meningocele have both been successfully treated by tapping.

[Eighteen hours after the operation the child was seized with convulsions, followed by comatose symptoms and death. It seems probable that fatal result was due to alteration of pressure in the ventricles and at the base of the brain by drawing off the cerebro-spinal fluid. Eighteen hours would seem to be too short a period for the full development of meningitis from two drops of iodine. Bryant and Gross both speak favorably of trying the tapping and injecting treatment. More recently the *London Medical Times and Gazette*, February 2, 1878, publishes a discussion on the cases of Mr. Gould, treated by tapping and injecting iodo-glycerine into the sac. Out of fifteen cases twelve are reported as successful. One child of eighteen months of age was tapped and injected five times, and finally recovered. On one occasion two and one half ounces of fluid were withdrawn with safety. It is claimed that the iodine dissolved in glycerine, being heavy, remains at the bottom of the sac, and does not spread up the canal.]

Compound Fractures of the Arm.—You have frequently seen this boy in the wards, and I bring him before you merely to exhibit the condition of his arm. On the 29th of December, while sliding down the banisters of a tenement house, the boy fell into the well of the building, and struck upon his elbow. The result was two compound fractures: one over the elbow-joint, the other in the fore-arm near the

wrist. The case looked bad. At the wrist there was a simple fracture of the radius and a compound fracture of the ulna, which bone had protruded through the wound. It was thought if we took out the crushed bones where the compound fracture existed at the elbow, that in the end the case would probably come to amputation. But the patient has done well, and is still improving. The bone is firmly united at the wrist, and the shape is very good. At the elbow it will be seen that the openings have nearly healed and that the motion is quite satisfactory. The end of the humerus was sawn off, and the fracture reduced, the operation being done after the Lister method. To-day my probe does not penetrate the opening, which seems entirely closed. We will therefore dispense with the antiseptic dressing and spray. At the time of the operation the question was seriously agitated as to whether it were safe to leave the articular ends of the olecranon and radius, they not being injured. It is a general feeling that articulating surfaces, if left, will not do well, because of their liability to ulceration. But here we did leave the hook of the olecranon and the head of the radius, and the case has recovered favorably. It is exceptional, for in my experience this is the only case which, where articulating surfaces were suffered to remain, has done well. There is in the ward a patient with similar conditions who is not progressing at all. In such cases I think the best way is to saw off the ends of both the articulating bones and also all articulating surfaces. How much of our success in this case is due to the antiseptic treatment I cannot say. There was some suppuration, but the treatment kept the wound clean. One advantage of this dressing is that but little pus forms, so that frequent dressing of the wound is not required. In the case, for example, of removal of a tumor from the axilla, four days since, there has as yet been only one re-dressing. In the ordinary dressing we must open the part at least once every day, and this of course disturbs the wound and retards progress.

Syphilitic Tumor of the Breast. — This colored man, already seen by some of you, has a swelling in the right breast. In the male a tumor in this locality is unusual. The left breast is soft; the right is hard and nodulated. The breast itself can be pinched up, so that the tumor seems to be underneath and independent of it. Enlarged breasts are rarer in the white than in the colored race, in whom, indeed, the breast has been known to develop to such an extent that it secreted milk as freely as the female gland.¹ I have put this man under specific treat-

¹ Professor Hall, of the University of Maryland, exhibited to his class in 1837 a colored man, aged fifty five, who had large, soft, well-formed mammae, rather more conical than those of the female and projecting fully seven inches from the chest, with large and perfect nipples. To the touch the glandular structure seemed to be exactly like that of the female. This man had officiated for several years as wet-nurse in the family of his mistress, and he

ment because of the syphilis which was evident one year ago. At that time he also had here and there tumors which probably were gummy. This enlargement on the chest varies in size from week to week, now smaller, now larger, and may be a gummy tumor. We are giving large doses of iodide of potassium, and hope the patient will improve. Years ago I took from the neck of a man what I supposed to be a fibroid, but found it ran in all directions, and that it was plastic. The man got well, and might have done so with medicine alone, for the tumor undoubtedly was specific. In this case if we have no improvement after a short time I shall operate.

[The tumor disappeared in three weeks.]

Periphlebitis. — Here is a case of periphlebitis which formerly was called adhesive phlebitis. The patient is a middle-aged woman, and has varicose veins, which furnish a typical example of plugged vessels, and illustrate the history of embolism. It will be seen that the condition is well marked. Here on the thigh are varicose veins filled with coagulated blood and surrounded by the blush of inflammation. When the patient came in, she could not walk. Here at the saphenous opening you see enlarged lymphatics. Below you observe the site of two thrombi which have formed near valves in the veins, where anastomoses occur, and have then gradually enlarged. The symptoms are all directly under the skin. Following parturition we sometimes have symptoms of the plugging of the deeper vessels and of inflammation extending up into the pelvis. Here every symptom is superficial and visible. If the patient walked about and submitted to the bad treatment of friction, the thrombi would probably be started, thus being converted into emboli, or traveling clots, which would become arrested somewhere else, where they would form metastatic abscesses. The treatment of this case is very simple, namely, rest in bed and soothing applications, but no motion, rubbing, or friction of any kind. We hope thus to soften and remove the clots by molecular absorption. Some may remain and so effect a spontaneous cure, similar to that by ligature, which latter operation is dangerous because it forms clots, which may become detached, and when once swept on by the blood current may go to any distance, but where they will go or what they may do we do not know. For the same reason friction also is very dangerous. Rest in bed is the indispensable and all-important treatment.

represented that the secretion of milk was induced by applying the children entrusted to his care to the breasts during the night. When the milk was no longer required great difficulty was experienced in arresting the secretion. His genital organs were fully developed. (Dunglison's Physiology, seventh edition, vol. ii., page 514.)

TWO CASES OF GLAUCOMA, WITH SOME REMARKS ON THE RELATIVE FREQUENCY OF THIS DISEASE IN AMERICA AND EUROPE.

BY HASKET DERBY, M. D.

THE following cases of glaucoma present some points of special interest, and are hence reported. The disease itself is, as has often been insisted on, one deserving the most careful study, not only from the specialist, but also the profession at large, into whose hands its subjects are, at the outset, so likely to fall. The prompt measures that should be taken for its relief, the comparative certainty of their action, and the disastrous consequences of neglect or delay have so often been alluded to that it would seem unnecessary continually to dwell on these points. Yet experience shows that they cannot too often be brought forward.

Characteristic as are the symptoms of glaucoma the disease occurs in this country with such comparative infrequency that it is less surprising when its first slight advances excite no alarm, or the age of the patient leads to their being looked upon as evidences of commencing cataract. In Europe it is estimated as forming about one per cent. of all cases of ophthalmic disease. Graefe found it to constitute 1.27 per cent., Förster 0.84 per cent., of their cases. Observations made on 55,146 instances of ophthalmic disease gave 688 cases of glaucoma, or 1.24 per cent.

I have collected from reports of various American ophthalmic institutions a total of 125,315 cases of disease, of which 645 came under the head of glaucoma, making a percentage of 0.51, and showing a greatly decreased proportion of the disease in this country. It should, however, be stated in passing that these figures are kept down by the statement made by the Massachusetts Charitable Eye and Ear Infirmary. Looking through the reports of this institution since 1867, and comparing them with those of other eye infirmaries in this country, we find, —

Total number of cases of eye disease in Massachusetts Charitable Eye and Ear Infirmary,	Glaucoma.	Per cent.
47,694	132	0.276
Total number of cases collected from other American institutions,	513	0.66
77,621		

It is interesting to note the relative frequency of this disease in private practice. Referring to my own records I note, —

Recorded Cases.	Glaucoma.	Per cent.
8719	67	0.77 nearly.

Glaucoma is evidently rarer in this country than in Europe.

Of my own patients twenty-three were males, forty-four females. The average age of the former was fifty-five and one half, of the latter sixty. Only four times, and always with females, did I see the disease in its acute form.

CASE I. Mrs. H., aged fifty-two, had always enjoyed excellent health, and never had any trouble with her eyes until within a few weeks. She came to me December 14, 1878, complaining of intermittent obscurations, and the occasional appearance of rainbow colors around a flame, both of these symptoms being experienced in the right eye only. On examination this eye, as well as the other, was found normal in every respect. Hypermetropia 2.75 D; vision $\frac{5}{6}$; visual field unimpaired; no corneal anæsthesia, dilatation of pupil, or increase of tension. The ophthalmoscope showed a venous but no arterial pulse; no excavation. January 13th of the present year I saw the patient again. Intense nocturnal pain and great falling off of vision had been present for four days. The right eye was now of stony hardness, pupil dilated and fixed, cornea hazy and anæsthetic, vision $\frac{3}{6}$. No view of the fundus could be obtained. The other eye remained normal. Within a few hours I etherized her, and performed a free iridectomy upwards. The anterior chamber was so narrow that the point of the knife became engaged in the iris, near its pupillary edge, carrying it before it for some distance, and producing a slight dialysis. Much bleeding took place during the operation, but before applying the bandage the anterior chamber was observed to be quite free from blood.

The next day I learned, to my astonishment, that pain in the eye had come on soon after the operation, and gradually increased in severity up to midnight, reaching an intensity it had never before attained. It had finally been subdued by the repeated application of warm fomentations, and up to the time of my visit (four P. M.) had not returned. On removing the bandage it was found that the anterior chamber had not yet been reëstablished. January 15th Mrs. H. reported that some pain came on about midnight; was, however, less severe, and lasted a shorter time than that of the day before. The wound was now healed, and a very narrow anterior chamber existed. January 16th, nine A. M. Entire freedom from pain for twenty-four hours, anterior chamber of normal size; some tendency to cystoid cicatrization about wound.

At noon of this day very severe pain occurred in and around the other (left) eye, radiating over the face and forehead, and down the side of the nose. It was most intense, and was compared by the patient, who had borne several children, to labor pain, differing, however, from that in having no remissions, and being even more acute. The eye that had been operated on remained in the same condition as at the previous visit, but the left presented the symptoms of acute glaucoma, increased tension, ciliary redness, dilated pupil, and diminished vision.

It was so late in the day, and the afternoon so dark, that I feared to undertake the operation at once. A one per cent. solution of eserine was repeatedly applied, and fomentations ordered, the result being the disappearance of the pain in the course of the evening. The next morn-

ing (January 17th) no symptoms of the attack remained except a narrowed anterior chamber. Ether was given, and iridectomy done upwards. That night intense pain came on in this eye, and was relieved by fomentations. January 18th. No anterior chamber. January 19th. Some pain in night; less, however, than the night before. A narrow anterior chamber exists. From this time the pain remained absent, and vision steadily improved. January 29th, when I saw her last, it was nearly $\frac{1}{2}$ in each eye, and daily gaining. The cystoid cicatrization had disappeared. There was a single retinal extravasation by the side of the right optic disc, no cupping in either eye, and no limitation of either visual field.

This case is of interest as showing the possibility of continuance of pain after the performance of the iridectomy. The pain here persisted while the anterior chamber remained open, and disappeared after the healing of the wound. If the modern theory that glaucoma depends on an affection of the pericorneal region, an obliteration of the means of filtration provided for the intra-ocular fluids, be correct, and if iridectomy or sclerotomy cures the disease by establishing that filtration, at first through the wound and later its cicatrix, we may well ask ourselves why the pain, in the present instance, should have increased in intensity while the cut remained open, and disappeared immediately it had closed.

CASE II. The other case illustrates the unexpected amount of good an iridectomy may accomplish even in a case of chronic glaucoma that had been treated by atropine.

I was called out of town on the evening of January 18th to see a lady, sixty years of age, who six months before had begun to notice intermittent obscurations of vision, and to need much stronger glasses than she had previously worn. Early in November she did a good deal of watching with a sick member of her family, and became much fatigued. Towards the middle of that month "inflammation," attended by severe circum and supra orbital pain, came on in each eye. She was treated for iritis, confined to a dark room, and ordered to use freely a solution of atropine. In a fortnight the pain in the left is said to have ceased, and the eye to have steadily gained vision ever since. The right did not improve in this respect, though the pain slowly abated.

For two weeks previous to my visit she had used no atropine. I found the pupil of the left eye slightly dilated and sluggish, oval in shape. No increase of tension, visual field normal, no cupping or pulsation. Myopia 1 D; vision nearly $\frac{1}{2}$. The right eye was very hard (+ T 2); cornea anæsthetic and hazy; much ciliary congestion; pupil dilated *ad maximum*, a thin edge of iris alone being visible. Visual field much limited in every direction except outwards; moving hand visible in two meters. No view of the fundus could be obtained.

Iridectomy was found very difficult, owing to the extreme narrowness of the anterior chamber. It was performed on the right eye January 19th, and a fair piece of iris was excised. Seven hours after the operation severe pain came on, but was relieved by fomentations. Four days elapsed before the anterior chamber was reestablished. On the 27th a clear view of the fundus could be obtained, and the optic disc was found to be slightly cupped. Vision had increased to $\frac{5}{24}$, and was daily improving. Mydriasis was still extreme; tension much less.

I had anticipated that the operation on the right eye might lead to a fresh attack of glaucoma in the left. Up to the present date, however, (February 11th) none has occurred.

ARSENICAL WALL PAPERS.

BY FRANCIS H. BROWN, M. D.

SOME two or three years ago, following the reading of a paper on arsenic papers, in the Boston Society of Medical Observation, a committee was appointed to memorialize the legislature for the passage of a law to prevent or control the use of arsenical pigments in articles of domestic use. The petition was signed by representatives of twelve or fourteen of the medical societies throughout the State, and was presented to the legislature in due form. At the call of the committee of the senate on the judiciary, well-known physicians appeared before them and urged sanitary reform. The subject was fully discussed, reference was made to numerous cases of poisoning, of long and tedious illness, of permanent invalidism, and all the other results, and the committee themselves admitted that the evil was a serious one, and should be abated. Attention was at the same time called to the great danger arising from the use of green tarlatan and other clothing fabrics, of the coloring matter of confectionery, of the glazed green papers employed to cover lozenges and in the kindergarten schools. It was admitted that the delicate and beautiful tints of the arsenical pigments, their cheapness, and the ease with which they are worked make them desirable agents, so far as the manufacturers are concerned, but such considerations could hardly be valid where the health of the people is concerned. At the same session of the committee a series of German wall papers with purely vegetable colors were shown, which give equally brilliant, enduring, and satisfactory results.

The committee, however, felt themselves justified in declining to advise legislation at that time. It is to be hoped that at some future time, and with the hearty aid of the profession, another attempt to secure sanitary legislation in this direction will be more successful.

Since that time a typical case of arsenic poisoning from wall papers

has occurred which is worth putting on record. A previously healthy young lady had slept for six years in a room having on its walls a beautiful paper in two shades of green. Her home was in a very healthy locality in one of the suburban towns; her manner of life was particularly health giving, and she exercised freely in the open air. To these circumstances are probably due her exemption from disease for a considerable period.

Of late years she had engaged in the study of vocal music to fit herself for public singing, and for this purpose she had come into the city twice a week.

For several months she had had symptoms of general malaise. She had first noticed headache, sleepiness, exhaustion, with slight and occasional pains in the left side and right shoulder. Her tongue had been coated for some months, and she had had a brassy taste in the mouth, nausea at times, with no known cause for it, great thirst, and capricious appetite. No diarrhœa or other noticeable irregularity of the bowels. For some time she had had nasal catarrh, especially after singing or talking; a tendency to take long breaths; a hard, dry cough; and some soreness of the throat. Her voice failed her, and she was obliged to abandon her singing. No other disturbances of the respiratory organs noticed.

For several years she had had weak eyes; latterly they had ached, particularly in the morning, and had caused her much trouble. Considerable emaciation, hot flushes, headache almost constantly, occasional cramps. During a visit of a fortnight away from home she "felt like a new person," and her symptoms almost entirely disappeared, to return again the next day after reaching home.

I examined the paper on her room, and found it heavily loaded with arsenic. On my recommendation it was at once removed, and the room thoroughly cleansed; the patient recovered her health at once.

In the same connection my attention has been called to a series of bright-colored papers, employed in kindergartens for young children, for purposes of ornament and for the manufacture of variegated mats and other attractive objects. One of these papers is of a bright green color, both glazed and unglazed. It is the same article which was formerly, and perhaps now, employed to cover lozenges and other confections. I have analyzed it qualitatively, and found it to contain arsenic in considerable amount. According to Dr. Draper's statement in the State Report for 1872, apparently the same paper contains 8.67 grains of the pigment to the square foot, representing some fifty per cent. of arsenious acid. Cases of serious poisoning of children by these papers have already occurred, and when it is remembered that the mouth of a young child is so frequently the receptacle of what is nearest at hand, we may well congratulate ourselves that more frequent cases of poisoning do not oftener occur.

RECENT PROGRESS IN ANATOMY.

BY THOMAS DWIGHT, M. D.

*Anomalies of the External Carotid and Internal Maxillary Arteries.*¹ — Professor Joessel, of Strasburg, has described some anomalies believed to be new. Those of the carotid are particularly interesting, and of surgical importance. In the first case the common carotid gave off the superior thyroid, and then, on a level with the hyoid, divided into the external and internal, from the latter of which the ascending pharyngeal arose. The external carotid gave origin to the lingual and to the occipital, from which a stylo-mastoid and a large muscular branch took origin. The carotid then, just above the angle of the jaw, divided into two trunks which reunited behind the neck of the jaw and continued as the temporal artery. From the anterior trunk came the facial, the inferior dental, and the internal maxillary vessels; the hinder one gave the posterior auricular.

The second case is very similar, but less complicated. Just at its origin the external carotid gave off the superior thyroid, and then, by a common trunk, the lingual and facial. The carotid divided a little lower than in the first case, and the trunks reunited at the same point. The anterior gave off the internal maxillary just before it joined the hinder one, which gave off the occipital and posterior auricular. The temporal took origin from the superior convexity of the arterial circle.

The following remarkable anomaly of the internal maxillary was practically symmetrical on both sides of the head. The essential feature is the bifurcation of the external carotid into its terminal branches, the temporal and internal maxillary opposite the angle of the jaw. The former keeps on in the normal course of the external carotid, but the latter turns behind the internal pterygoid and then pierces it, making its way before the external pterygoid to the spheno-maxillary fossa.

*Anomaly of the Femoral Artery.*² — Mr. A. H. Young describes a peculiar arrangement of the branches of the femoral artery which is of surgical interest, and which differs from all published anomalies. It occurred on the right leg of a male subject. The important point is that the profunda was wanting, and the branches that supply the lower part of the adductor region and of the back of the thigh were given off from two trunks which arose after the femoral had passed beyond Scarpa's triangle and was under cover of the sartorius. The first of these trunks arose five and one half inches below Poupart's ligament, the second one inch lower. It is evident that if the femoral were tied at the point of election the supply of blood to the parts below the ligature would be much smaller than usual.

¹ Archiv für Anatomie und Entwicklungsgeschichte, 1878, Heft 6.

² Journal of Anatomy and Physiology, January, 1879.

Mr. T. P. Anderson Stuart¹ records a peculiar course of the *popliteal artery* which also might be of surgical importance: "The popliteal artery, after passing through the opening in the adductor magnus, instead of, as it usually does, coursing downwards and outwards to the popliteal space, so as to lie between the two heads of the gastrocnemius muscle, passes almost vertically downwards and outwards beneath it, between it and the lower end of the shaft of the femur. The inner head of the gastrocnemius arises much higher than usual, namely, from the inner division of the linea aspera about an inch and a half above the condyle, and thus leaving a considerable space between it and the condyle, over which space the artery passes."

The Ridges of the Human Palate. — The ridges very commonly found near the front of the hard palate have been overlooked by many anatomists. Owen, in his Comparative Anatomy, states that "in the higher quadrumana the palate is smooth or unridged, as in man." This is in both cases a mistake; it is ridged in the higher apes, and, as above mentioned, sometimes in man. Perhaps Sappey gives a better account of these ridges than is found in the other standard works on anatomy. He says: "On each side of the median raphe, in the anterior third of the palate, there is a series of rough crests, transverse or oblique, straight or curved, three or four in number, raised one above another from below upward and from before backward. Between these principal crests there are frequently others less well marked." It is to be objected to this description that it implies that these folds are constant, which is not the case, and also, if we understand it aright, that the posterior ones are the most developed, which is the reverse of the fact.

Professor Carl Gegenbauer² has written an interesting paper on these ridges, which he has studied in the embryo, the child, and the adult. In embryos measuring 4.2 cm. and 4.5 cm. from the vertex to the breech he found the hard palate perfectly smooth. A little later, however, there was evidence of the beginning of the alveolar process, and also the posterior, median part of the hard palate was found flat, while the rest sloped down towards it. Moreover, on the latter part were to be found from five to seven transverse ridges, almost meeting in the fore part of the palate, but separated by the flat portion in the posterior part. As the embryo grows, the two parts of the hard palate become alike, and the transverse folds are collected into the anterior portion, the foremost being the more developed. In the later months of pregnancy and at birth their edges are fringed and their arrangement less regular. They persist during childhood, and then gradually atrophy; traces are often found in the adult. Gegenbauer states that these folds are found in all mammalia, with the exception, perhaps, of the whales.

¹ Journal of Anatomy and Physiology, January, 1879.

² Morphologisches Jahrbuch, Band iv., Heft 4, 1878.

[We should be inclined to ask if the plates of whalebone in the *balæni-dæ* might not be considered homologous with these ridges.] There seems reason, therefore, to class these ridges among the rudimentary organs which are useful in some types, as these are as aids to mastication in animals, and exist in other types in which they apparently perform no function. There is no reason to believe that when these are most developed they can be of any use to the human infant.

The Development of the Knee in the Human Embryo. — Dr. Bernays,¹ of St. Louis, has written an extremely interesting and valuable paper on this subject, and has added some observations on joints in general. He has made several series of microscopic sections through the knees of the human fetus, beginning with one which measured only two cm. (from the vertex to breech?), and which he supposed to be some four or five weeks old. Cartilage was already differentiated, and there was more than a hint of the quadriceps extensor. The author calls attention to the fact that the head of the fibula is not much further from the femur than the tibia is, and that the tibia does not project over it as yet. He gives special importance to a cellular layer surrounding the cartilage, from which the latter increases. It is deeply stained by carmine. In the next embryo, three cm. from vertex to breech, the ends of the bones show some slight approach to their shape, though no joint cavity is yet visible. The interarticular ligaments can be distinguished. The patella can be seen below the fibres of the extensor, which pass uninterruptedly over it. The sections of an embryo 4.5 cm. from vertex to breech show a great advance in differentiation of tissue and in the shaping of the joint. The articular cavity is present, and the whole shape of the parts is about the same as that of the child at term. Dr. Bernays holds that the cavity of the joint is formed by a separation, probably due to muscular contraction, of the cartilaginous ends of the future bones. At an earlier stage these are separated by a certain amount of still undifferentiated tissue. A part of this is transformed into ligaments and intra-articular fibro-cartilage; the remainder becomes cartilage in continuation with those of the femur and tibia, till finally it divides at the middle. Little bulgings out appear at different points. The ligamenta alaria, the ligamentum mucosum, and the synovial fringes are formed from connective tissue. The author maintains that the synovial membrane is a purely connective tissue formation, and is not lined with an epithelial layer. Dr. Bernays dwells on the point, which we agree with him in considering of importance, that muscular action cannot, as some have asserted, determine the shape of the joint; for this is pretty clearly indicated before the cavity has appeared and any motion is possible between the segments. He holds that the form of the joint is due to inheritance, and that it is at a later period that irregular muscular action

¹ Morphologisches Jahrbuch, Band iv., Heft 3, 1878.

may complete the development of the cavity. The author of this paper has done his work very well, and we recommend its perusal to those interested in this branch of embryology.

The Quadriceps Extensor Cruris. — This muscle is one which gives much trouble to students who endeavor to understand its true structure. Dr. Williams's paper,¹ though necessarily rather dry, is of real value. We have time to allude merely to some of the chief points. He shows very convincingly that the acetabular head of the rectus is its real termination (or origin), and that the more superficial head attached to the anterior inferior spinous process of the ilium is quite a secondary affair, being nothing but a band of condensed fascia instead of a true tendon. The microscope shows a great number of yellow elastic fibres in this head on the addition of acetic acid, and hardly any in the acetabular head. Dr. Williams remarks that "this view also receives confirmation from the examination of the muscle in the fœtus. At about the sixth month only the acetabular head can be distinguished. The iliac head cannot be discriminated from the fascia of the part. At full term the acetabular head is as large as the main tendon, of which it is obviously the direct continuation, whilst the iliac head, though plainly visible, is relatively insignificant." We are not aware that the account of the lower end of the rectus presents anything new, but it shows that to obtain a correct idea of it the student must not fail to examine its deeper parts. We must be pardoned another quotation which gives Dr. Williams's views on the origin of the vastus internus, which is frequently taught to be well-nigh inseparable from the crureus: "At the middle third of the thigh the thick fleshy edge of the vastus internus may be readily distinguished from the aponeurotic surface of the crureus. A line drawn from the tubercle at the middle of the spiral, or anterior inter-trochanteric line, inclining downwards and slightly outwards to the middle of the upper border of the patella, will define accurately the thick anterior border of the vastus internus. This tubercle at the middle of the spiral line has not hitherto been noticed by anatomists. In well-marked bones it is always distinct. I have ventured to call it the *inferior cervical tubercle*, in contradistinction to the tubercle at the top of the spiral line, which may be spoken of as the *superior cervical tubercle*. It corresponds to the attachment of the lower end of the inner arm of Bigelow's inverted Y ligament, just as the upper tubercle does to the outer arm of this ligament." Dr. Williams describes a nerve from one of the muscular branches of the anterior crural which is distributed to the suberureus and to part of the synovial pouch, and which, running along the edge of the crureus for its lower three fourths behind its line of union with the vastus internus, forms a

¹ The Anatomy of the Quadriceps Extensor Cruris. By W. Roger Williams, M. R. C. S. *Journal of Anatomy and Physiology*, January, 1879.

good guide for distinguishing these muscles. The description of the origin of the crureus is very good. He makes the muscle consist of four laminae, distinct above, each one rising from a fleshy arch across the front of the femur and fusing below. He considers the subcrureus a rudiment of a fifth arch. The author calls attention to the fact that the common tendon, "as insisted on by Cruveilhier, is inserted not into the upper *border* of the patella, but into the *front* of its obliquely cut upper surface. Similarly, the ligamentum patellæ is fixed to the *front* of the apex. In this way the axis of the tendon is removed somewhat from the centre of motion of the joint, so that the muscle acts at the greatest advantage." It is interesting to recall that Dr. Bernays in his paper on the development of the knee shows that in the earlier stages the fibres that are to form this tendon pass directly over the patella.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

T. M. ROTCH, M. D., SECRETARY.

OCTOBER 26, 1878. Sixty-one members were present, the president, DR. C. D. HOMANS, in the chair.

Retroversion of the Uterus complicated with Pregnancy. — DR. J. R. CHADWICK read a series of cases of Retroversion of the Uterus complicated with Pregnancy. Reserved for publication.

Œsophagotomy. — DR. G. W. GAY read a case of Œsophagotomy, which was published in the JOURNAL for March 13th.

Amputation at the Hip-Joint. — DR. GAY also reported the following case: The patient was a stout, fleshy man, forty-two years of age. He first noticed a small, oval bunch just above the internal condyle of the left femur three or four years ago. At first the growth was gradual, but of late it had increased very rapidly, being a third larger at the time of the operation than it was three months previously. He entered the City Hospital October 11, 1878, under the care of Dr. Thorndike. The left thigh measured thirty-eight inches in circumference. The tumor was hard, lobulated, and extended from the knee to the great trochanter. The pain was so severe that life was a burden to the man, and he was willing to take any risk for the sake of relief. October 18th Dr. Thorndike amputated the leg at the hip-joint by a large, outside skin flap extending from the middle of Poupart's ligament to the tuberosity of the ischium, and an inner muscular flap. The femoral artery was tied previous to making the flaps; vessels were seized as soon as divided, so that the hæmorrhage was not excessive. Not over half a dozen ligatures were used. It should be stated that the sphincters were dilated, and the hand passed into the rectum previous to the operation, with a view to controlling the hæmorrhage by pressure upon the common iliac artery. The vessel was easily reached, but owing to the large amount of fat and soft tissues about the artery,

and to the fact that the arm of the assistant would have been in the operator's way, that plan was abandoned, and the femoral artery tied about three inches below its commencement. The patient did well for two days, when pyæmic symptoms set in, and he died on the fourth day. The amputated limb weighed fifty-four pounds.—DR. E. G. CUTLER reported that a gross examination of the thigh showed it to be made up of fat tissue, which was elastic, more or less gelatinous, and was arranged distinctly in alveoli surrounded by a fibrous tissue bearing blood-vessels. The disease began in the thigh, posteriorly, at the back of the intercondyloid space, and encroached upon the tissues in a general upward course in all directions; the bone was but slightly involved behind and below. In no place had the growth broken through the hard portion of the bone into the cancellated structure. A microscopical examination showed the tumor to be composed of a basement hyaline transparent substance, in which, imbedded in little grooves, were cells of various shapes, round, oval, stellate, and caudate. These cells had but a single wall. In other places the basement membrane was fibrous, and the cells were close together. The cells were differently arranged in different parts,—in some places close together, in others more separated. The tumor was an enchondroma.

Imperfect Plumbing.—DR. H. I. BOWDITCH presented a specimen of lead pipe which had been taken from a house where a case of typhoid fever had occurred, and later one of diphtheria. A leak was detected by the peppermint test at the junction of this pipe with the soil-pipe, it being connected with the latter only by means of putty and wire.

Oleic Acid.—DR. E. W. CUSHING called the attention of the society to the advisability of applying, in certain cases where the hypodermic injection of morphia is objected to, a solution of morphia in oleic acid, rubbed over the painful part. He stated that he had found it as efficacious as hypodermic injections, but that it did not act quite so quickly.—DR. INGALLS remarked that he had tried this remedy in cases of painful joints, some years ago, without any apparent effect, but that he had probably made use of a poor preparation.—DR. CUSHING replied that very marked results had been obtained from the application of a mixture of morphia and mercury, and that he knew of a case where quite severe symptoms of poisoning had arisen after the application of thirty minims of a solution of morphia in oleic acid of the strength of Magendie's solution.

Felons.—DR. BRADFORD stated that he had noticed in his treatment of felons that, after the incision, the wound healed more rapidly when dressed with carbolized oil than by the old method of simple poulticing; he is now in the habit of first washing the wound in a solution of carbolic acid, and then applying cotton-wool soaked in carbolized oil, the whole being enveloped in sufficient wool to retain the flow of pus; the dressing is not removed for twenty-four hours, and is then reapplied.

NOVEMBER 30, 1878. *Electrolysis of Uterine Fibroid.*—DR. E. CUTTER reported the case of a woman, forty-four years of age, with a uterine fibroid, through which he passed a current of electricity by introducing one of the needles into the tumor by the rectum, and the other through the abdominal

wall. At the time of the operation the pulse rose to 130 beats per minute; after the operation considerable pain was reported, and the temperature at one time rose to 102° F. Relief from pain and from hæmorrhage was claimed for the operation.

Excision of the Hip-Joint. — DR. E. H. BRADFORD reported a series of cases of excision of the hip-joint, and exhibited the specimens.

Optico-Ciliary Neurotomy. — DR. WADSWORTH exhibited a patient on whom he had divided the optic and ciliary nerves of the left eye to avert the danger of sympathetic ophthalmia. The man was a boot-black, forty years of age. Fourteen years ago cataract had developed in both eyes. The cataract was removed from the left eye thirteen years ago, but some two years later its sight gradually failed again, as he was told, from separation of the retina. Ten years ago the cataract was extracted from the right eye. Both eyes were quiet till the 10th of September last; then the left became red, he had photophobia and lachrymation, and soon there came on tenderness over the upper part of the ciliary body, though without much pain. He was treated as an out-patient at the Infirmary, and toward the end of October was apparently well, and resumed his work. He had been at work but a week, however, when the redness of the left eye and photophobia returned, and three or four days later, November 7th, he went to Dr. Wadsworth, who found in the left eye moderate circumcorneal congestion, with tenderness on pressure in the upper ciliary region; its pupil was large, but no reflex could be obtained from the fundus; it was completely blind. The right eye was sensitive to light, but appeared otherwise in good condition. Atropine, rest, and avoidance of light did not relieve the symptoms, and there also began to be an appearance of sparks before the right eye. November 12th, under ether, an incision was made over the internal rectus of the left eye, a strabismus hook passed beneath the muscle, and two sutures carried from within outward through muscle and conjunctiva a little back from the insertion of the former. The tendon was then divided $\frac{1}{2}$ ''' from its insertion, and the cut extended freely upward and downward through the conjunctiva and Tenon's capsule. The attached end of the tendon was seized by forceps, and the globe rolled outward, while curved scissors were pushed between globe and capsule, and the optic nerve divided as in enucleation. Very little bleeding followed, but as a measure of precaution the lids were closed, and pressure made with a sponge for two or three minutes. The curved scissors were again introduced to divide the remaining ciliary nerves and arteries, and then the globe could be readily rolled into a position which brought the stump of the optic almost directly in front, and made it evident that all the ciliary nerves had been severed. The eye was replaced, the internal rectus united to its tendon by the sutures, and a compressive bandage applied. There was very little exophthalmos at this time. The evening after the operation there was pain in the head, but not particularly about the eye, and apparently attributable to the ether. The next day the exophthalmos was considerable; it seemed to be owing to swelling of the tissues behind the eye, not to hæmorrhage. The lids were ecchymosed, but not swollen; the conjunctiva was dark red, somewhat swollen and ecchymotic. The cornea was clear. Aside from a little tender.

ness over the conjunctival wound, there was no pain, nor was there any subsequently. During the next few days the exophthalmos gradually subsided, but chemosis of the lower part of the conjunctiva came on. The sutures were removed on the fourth, the bandage was omitted on the ninth day. The chemosis diminished for several days; then, probably from slipping of the bandage, and consequent uneven pressure, increased again somewhat. During the past week, under iced compresses, it had disappeared. Meanwhile the eye had been constantly gaining in freedom of motion, until, but for a little insufficiency on the side of the divided muscle, it moved as far and as readily as the other. The cornea was tested on the second day, and found completely anæsthetic, and it had remained so; its transparency had been unimpaired from the first. On the twelfth day a small clot of blood was seen at the bottom of the anterior chamber. Nothing was discovered to account for its presence, and two days later it had been absorbed. There still remained some conjunctival congestion, but in other respects the eye appeared as well as before the operation. Dr. Wadsworth said that the operation was a comparatively new one. Schoeler, of Berlin, had published an account of ten cases in which he had so operated during the last part of 1877 and first part of 1878. Hirschberg and Schweigger had also performed the operation successfully. It was remarkable that after division of all the nerves supplying the interior of the eye and the cornea, and division of the greater part of the arteries going to the interior of the eye, it should still preserve its vitality. Ulceration of the cornea Schoeler had indeed observed in two of his cases, but it was not extensive, was painless, and healed readily under appropriate treatment; it could, moreover, in both cases, be fairly referred to a defect in the operation or after-treatment. It could not yet be stated with certainty that the ciliary nerves might not reunite, as so frequently happened in the case of section of other nerves, and thus opportunity for the excitation of sympathetic ophthalmia be again presented. But the anatomical conditions were here such as to make reunion at the least very improbable. The ciliary nerves were small, ran through loose tissues, and could readily contract, and even though a few of them might be held in position by connections with Tenon's capsule, yet the almost constant movement of the eye within the capsule must of itself make reunion very unlikely. Remembering that after enucleation it was sometimes impossible to wear an artificial eye with comfort; that it was often difficult to procure an eye which matched the other well; that the cost was considerable for a poor person; that the movement of an artificial eye was in the most favorable case much limited, while often there was no movement, it seemed that optico-ciliary neurotomy, as Schoeler had named the new operation, was likely to take the place of enucleation to a very considerable extent.

Santa Barbara. — DR. E. L. PARKS made some interesting remarks in regard to the climate of Santa Barbara, and its value as a place of resort for consumptives, which will be published.

FOTHERGILL ON THE ANTAGONISM OF THERAPEUTIC AGENTS.¹

THIS essay received the Fothergillian gold medal for 1878. The subject of antagonism is presented by stating what particular symptom which may follow a definite dose of one drug may be relieved by the administration of a definite dose of another drug. Upon these data Dr. Fothergill suggests that medicinal agents possessing this form of antagonistic action may be combined; so also symptoms resulting from pathological lesions or functional derangements may receive useful antagonistic treatment, as, for instance, the employment of digitalis in cases of dilated heart. In his first chapter he presents a historical summary of experimental inquiry into the antagonism of opium and belladonna, of physostigma and atropine, strychnine and chloral hydrate, aconite and atropine, belladonna and jaborandi; but closes with the lament that the British vivisection act arrests further progress in his own country, while a grand field is open to foreign inquirers.

The second chapter is concerned with the action of drugs as illustrated chiefly by experiments on lower animals, but Dr. Fothergill does not omit the use of observations derived from clinical experience, especially those recorded by Crichton-Brown. Many suggestions are here offered as to the clinical importance of various combinations of drugs, as also symptomatic and pathological contra-indications against certain combinations, and also as to the value of combining drugs whose effects are partially controlled by others.

The fourth chapter is taken up with a discussion as to the antagonism of those drugs whose effects are the results of disturbance in the circulation of blood. Here Dr. Fothergill gives in detail the *modus operandi* of digitalis, and apologizes for the digression by explaining that his original essay on digitalis is now out of print. A comparison with this essay shows that his present method of stating the action of digitalis is clearer than in his former publication. Dr. Fothergill here specifies those drugs which will control or antagonize irregularities in the respiratory functions due to pathological conditions, and points out certain paths in which the clinical observer may further test the therapeutical action of medicines; in a separate chapter he explains how the antagonism of medicinal agents may be used to counteract poisonous agents, and finally how the theory of antagonism may be put to practical purposes in stimulating the organic life, or in checking an over-excitability of these phenomena.

The manner in which the author uses the word antagonism in place of stimulants, sedatives, etc., with various adjectives to qualify these latter words, seems to exhibit a more certain knowledge, and prevents ambiguity. It suggests to the reader that in a near future the language of therapeutics will be simpler and more decided; the various forms of classification used by each writer and lecturer on therapeutics may be abrogated, and in their stead we may have laid down in simple and terse phraseology a practical application of medicinal agents with which to combat symptoms due to known pathological

¹ *The Antagonism of Therapeutic Agents, and What it Teaches.* By J. MILNER FOTHERGILL, M. D. Edin., etc. Philadelphia: Henry C. Lea. 1878.

conditions; and yet it may be, and probably it is, a fact that the enunciation of a knowledge of these actual effects of medicinal agents is at present premature. The confident assumption of such knowledge bids fair for the determination of error from truth. We recommend this book to the busy practitioner, who will get many a hint to help him at the bedside, and most certainly will be led to analyze his own reasons for the use of this or that method for the cure of disease.

DELAFIELD'S PHYSICAL DIAGNOSIS.¹

THE preface to this book states that "this manual is intended for the use of those who have to teach and to learn the art of physical diagnosis. It is made as concise as possible, and bound interleaved that it may be taken into the wards and used as a note-book as well as a guide. The object of the entire work is to furnish a sort of skeleton, to which each one may add the facts furnished by his own observation."

We have no hesitation in saying that this book is unworthy of its distinguished author (Dr. Delafield). Entitled a Manual of Physical Diagnosis, it contains scarcely more than an allusion to other methods of exploration than auscultation and percussion, and as a compend of information desirable from these methods it is certainly as remarkable for what it omits as for what it contains. It is indeed a skeleton, but one with very many of its bones missing. For instance, that great field for physical exploration, the abdomen, is disposed of by simply giving the results of percussion of the hepatic, the left hypogastric, and the anterior abdominal regions in health, and an enumeration of the viscera situated in the different regions (from Quain's Anatomy), without telling the student how to define these regions, the author even giving different names to two out of three of them on the next two pages. The results of auscultation and percussion in morbid conditions of the abdomen are not even hinted at, peritoneal effusion, tympanites, enlarged spleen, aneurism of the abdominal aorta, and other tumors thus escaping notice by wholesale.

The compend of morbid signs and their combinations in thoracic diseases is certainly no better than that contained in the unpretentious little book of Flint, and the section on the heart is very deficient; for example, the only information one gets to help him in the diagnosis of a valvular lesion is the simple statement of the murmur which may accompany such lesion.

The author differs from most auscultators in making flatness not an absence of resonance, but a peculiarity in quality of sound (*leer* of Skoda?); in using dullness as an absolute term, for example, making dullness of both apices a normal condition; in giving the same quality to normal expiration as to normal inspiration, calling it pulmonary; in adhering to the old conception of *œgophony*; and in claiming that pericardial effusion first accumulates in the *posterior* part of the sack.

The two drawings with superimposed plates, by Dr. Stillman, are excellent.

In conclusion, we would say that this book can be of no possible use to one fit to be a teacher, and one which we see no reason to recommend to a student.

¹ *A Manual of Physical Diagnosis.* By FRANCIS DELAFIELD, M. D., and CHARLES F. STILLMAN, M. D. New York: William Wood & Co. 1878. Pp. 30. Quarto.

PRACTICAL SURGERY.¹

THIS book possesses the unusual advantages of combining in one volume subjects which are ordinarily, for no good reason that we can see, treated separately. We find here, in addition to the plates and descriptions of "operative surgery," the whole department of minor surgery, so that the book forms an excellent *vade mecum* for the surgical student. It is well to remember that the author has had unusual opportunities for preparing such a work, having served as teacher in several capacities, and possessing in an eminent degree the faculty for drilling students in careful methods of study in a manner but too frequently overlooked in our present system of education. The author's name is therefore in itself a guarantee that the contents are of the highest grade of excellence, and such is indeed the fact. Under the head Surgical Dressings we find, for instance, minute directions for preparing new sponges, among which a number of convenient methods of preparation are given. We should, however, take exception to the advice to use fine sponges, a coarse mesh-work being much more useful, in our opinion, in surgical operations. The advice to use new sponges is good, and considering how cheaply they may be bought, if one is not too indolent to be independent of one's apothecary, it is surprising that old and dirty sponges are preserved with such tenacity. Among the immovable bandages we do not find the dextrine, so well known, in Boston at least, and such an elegant form of bandage if lightness and durability are desired, and in which a young lady's "limb" can be made to look almost as "neat" as if encased in the latest style of "billiard-cue" or "clocked" stocking. The starch, silica, and plaster bandages are, however, all accurately described.

The rules for antiseptic dressings of course have a place here. We come next to a word which we are sorry to find, an Americanism which has of late years come into frequent use. We should be glad to see the grandiloquent and pedantic "ligation" omitted from all future writings, and the old, more modest, but to our mind far more surgical, "ligature" allowed to resume its place. "Ligation" begets "ligate," which we think even more offensive. The directions for *tying* arteries are carefully given, and the diagrams are wonderfully clear for their size, as are also those for amputations. The descriptions of operations are concise and plain, and the variety selected is not so great as to discourage the student. In short, the book is just what is needed for the clinic and dissecting-room, and is far superior to any other of the kind we have seen from the pen of an American author.

STAFF AND LINE.

WE supposed that the troubles between the "staff and line" in the army and navy had been composed long ago. We believe that peace now reigns regarding this matter in the former service, but another war seems brewing in

¹ *Practical Surgery*. Including Surgical Dressings, Bandaging, Ligations, and Amputations. By J. EWING MEARS, M. D. With Two Hundred and Twenty-Seven Illustrations. Philadelphia: Lindsay and Blakiston. 1878.

the navy, if we may judge from a little pamphlet just received, with the title, *A Memorial by Certain Line Officers of the Navy, intended to reopen a Dispute which was settled by Congress in 1871, after full Discussion and Deliberation. With Notes, Comments, and an Appendix. 1879.* It would seem that the line officers of the navy consider the rank and privileges granted the staff in 1871 to be of dangerous tendencies and subversive of discipline. On the other hand, General Sherman says that similar concessions to the medical and other staff officers in the army "have worked well in practice." Senator Edmunds, chairman of the senate judiciary committee in 1875, in his written opinion as to the proper interpretation of the law of March 3, 1871, differs radically from the memorialists (the line officers) in his understanding of the law.

It is difficult for one who has never served in the navy to comprehend the feeling that exists in that service about matters which seem trifling to civilians. But when men are boxed up in the small space and confined air of a ship it is very necessary that their rights and duties should be exactly defined, to prevent clashing of claims and tempers. One would not wish to serve out his worst enemy with graver retribution than to cork him up in an iron-clad with an overbearing, a drunken, or a dirty messmate. Like the starling, he can't get out, and if his disagreeable comrade be a superior officer his position is indeed intolerable. Hardships of this sort happened during and before the war, but are rare now. Indeed, a better set of men for honor, for education, or for companionship does not exist than our naval officers, — line and staff. Doctor Johnson defined a ship as a prison, with a chance of being drowned. In this place of confinement the claims of the aid or executive (as they call the "first luff" now), the mess, the salutes, the official etiquette, the thousand petty worries which arise on board, are influenced by the relation of the line and staff.

The act of 1871, which our gallant friends the line officers are trying to have reconsidered, gave relative equality in all save command, which the doctors, paymasters, and engineers do not want, except such as is conceded in each department. It is rash to predict what Congress may do in any given case, but it does not seem probable that that body will rescind the legislation of 1871. It will be difficult to prove that real harm has resulted from it, and British military journals affirm that the status is the same as that existing in European navies. In time of peace the navy offers to a young man rare chances to see the world; in war, unless more than an ordinary share of fighting and chasing falls to his lot, it is dismal. When one is sick or old in the service he is pensioned, and has enough to die on comfortably. But unless a surgeon be adventurous by nature he'd better stick to his "shay" and never go to sea.

JOHN MAYNARD WOODWORTH.

THE death of the supervising surgeon-general of the marine hospital service will take the country by surprise. His youth and vigor, and the prominence in which he has been placed during the past year, owing to his active labors in behalf of state medicine, have led many to predict for him a long and honorable career. It was doubtless the great mental and physical strain thus imposed that overpowered him, and opened the way for an erysipelas, which was

followed by a fatal pneumonia. He was born at Big Flats, Chemung County, N. Y., August 15, 1837. He was taken to Illinois by his parents, and was educated at the University of Chicago. He first studied pharmacy, and attended the lectures on medicine and chemistry at the Rush Medical College. He afterward entered upon the regular study of medicine in that institution. The winters of 1859, 1860, and 1861 he spent in the Smithsonian Institution, working under the personal supervision of Prof. Spencer F. Baird. He graduated in 1862 at the Chicago Medical College. He immediately entered active service in the army of the Union as an assistant post surgeon at Camp Douglass, Illinois, and shortly after was appointed assistant surgeon of volunteers, and joined General Sherman in the field near Corinth, remaining with his command until the Union armies were mustered out in 1865. In 1863 he was promoted to the rank of surgeon, and assigned to duty as medical inspector of the fifteenth army corps, and afterward medical inspector and medical director of the army of the Tennessee. During Sherman's march to the sea he was breveted lieutenant-colonel. In 1865 he visited Europe, and in 1866 he established himself in Chicago. In 1871 he was appointed supervising surgeon-general of the marine hospital service of the United States, a position which he held up to the present time.

Dr. Woodworth's valuable work in promoting the efficiency of the service he had in charge has been frequently commented upon by us, and is well known to our readers. The valuable weekly sanitary reports compiled from all quarters of the globe savor of an enterprise peculiarly American, and were highly creditable to himself and the country. He has been indefatigable in his work on the yellow fever commission, and in his efforts to obtain national legislation which would enable us to prevent a return of the disease. The bill which finally passed during the last hours of Congress, and the text of which we give elsewhere, although not in accord with his views, established a board of health to which he, among others, had already been appointed when death snatched him in the very height of his career. His loss will be sincerely mourned by the profession throughout the country.

THE FUTURE HEAD OF THE MARINE HOSPITAL SERVICE.

THE dispatch which announced Dr. Woodworth's death hinted also as to his probable successor, the statement being made that he recommended Dr. J. B. Hamilton, an able officer who has been stationed at this port, for that position. We understand that Dr. Heber Smith, now stationed at New York, is the senior officer in the line of promotion. In another column we give the views of one who claims the service as a suitable field of usefulness for medical officers of the navy. It has also been suggested that the duties of the service in regard to quarantine regulation would more appropriately be administered by the new board of health. If any change in this department has been rendered necessary by recent legislation, or to make it harmonize better with future developments, now is certainly a most appropriate time to make it, and we trust that no hasty action will be taken, but that the best interests of the public health will be carefully considered before a decision is arrived at.

THE JOURNAL OF PHYSIOLOGY.

WITH the current number the first volume of this journal is completed. It is interesting to notice that of the thirty authors whose names appear in the table of contents one third are Americans, and that their work has been mostly done in American laboratories. The institutions thus represented are the Harvard Medical School, the University of Pennsylvania, the Johns Hopkins University, and the University of Michigan. An important feature of the journal is the classified list of books and papers on physiological subjects, which appears in each number. The fact that this bibliographical list occupies fifty-two pages of the first volume shows with how much industry physiological researches are at present prosecuted.

The number before us contains articles by Drs. Cutler and Bradford, of this city, on the Changes of the Globular Richness of Human Blood; by Dr. V. C. Vaughan, of the University of Michigan, on the Estimation of Lime in the Shell and in the Interior of the Egg before and after Incubation; by Dr. Sidney Ringer, of University College, and Mr. E. A. Morshead, on the Physiological Action of Narcissia; and by Dr. Charles S. Roy, assistant at the Physiological Institute of the University of Strassburg, on the Influences which modify the Work of the Heart.

The *Journal of Physiology* has clearly established its claim to be regarded as the organ of English-speaking physiologists, and if subsequent volumes sustain the high character already acquired, its success may be regarded as assured.

MEDICAL NOTES.

—The Boston Dental College held its eleventh annual commencement on the 5th instant, and graduated thirteen students, three of whom, by reason of under age, or deficiency of pupilage, will have to wait a little while for their diplomas. There have been forty-seven students connected with the college the past year, with prospect of a larger number for the year to come. A spring term opens March 17th to continue ten weeks, and a preliminary term for the month of October will precede the regular November session.

—Physicians who wish to obtain that rare article, a good bandage, will do well to refer to an advertisement in the present number. The very best quality of cloth and every desirable width and length are to be obtained. Coming as they do in assorted lots in boxes, they are exceedingly convenient for office use. The luxury of a well made bandage is hardly appreciated by those who have not had access to a supply of the best quality.

—M. Galippe has published, according to the *British Medical Journal*, some remarks on the propagation of syphilis through the various trumpets, whistles, and other toys sold in the streets by itinerant hawkers, who not only allow every purchaser to try them, but also, if the latter fail to perceive their peculiar properties, perform on them themselves, and hand them to the customers without wiping them. In this way (especially about Christmas) hundreds of people, both adults and children, try one instrument after another, laying each down without wiping it. It is easy to see how rapidly the infec-

tion may be spread in this way, attacking healthy persons. Some of these toys, especially little balloons which are inflated by blowing into them, and which in allowing the air to escape produce some sound, pass through the mouths of three or four workmen before they are sold to the public. The author therefore advises parents never to let their children have any toys which have not been thoroughly cleaned.

— Dr. Pajot prepares an elastic pencil of caustic by dipping a laminaria tent, diameter two millimetres, into a rather thick mucilage, and afterward rolling it in finely pulverized nitrate of silver; when dry it forms an elastic pencil which may be readily introduced into the uterine or other cavity without fear of fracture.

NEW YORK.

— The Demilt Dispensary, one of the best equipped and most admirable institutions of the kind in the city, or, indeed, the whole country, has just issued the report of its work during the year 1878. The number of new patients treated by its physicians, either at the dispensary or in their own homes, was 25,002, the number of prescriptions made up 64,615, and the number of vaccinations 209. Since the foundation of the institution, a little over a quarter of a century ago, the whole number of patients has been 678,675, of prescription, 1,419,643, and of vaccination, 53,711. During the year the State Charities Aid Society sent a communication to the managers of the dispensary, asking their opinion as to the advisability of confining the work of relief to the district in which it is located, and of charging a small sum where the patients were able to pay it. A committee from the board of managers met with similar committees from other dispensaries for conference, and as the result of the report of this committee the managers directed that after the first of January, 1879, the sum of ten cents should be asked for each prescription. This plan has been tried in other dispensaries with good results, and it is thought to have a beneficial effect on those applying for relief, as it tends to promote self-respect. The managers also decided to confine the charitable work of the institution to the district in which it is situated, and which contains a population of about 125,000, three fourths of the people being occupants of tenement houses. Before this rule was enforced, it was found that large numbers were availing themselves of its advantages who should properly have been treated by other dispensaries, — some even coming from adjoining cities and States, in consequence of the high repute of the medical staff. As a rule, the physicians composing the latter are men of recognized ability in their various departments, and under the auspices of a board organized by them the clinical reports of the Demilt are published in the *New York Medical Journal* every month. These reports, which are edited by Dr. Thomas E. Satterthwaite, one of the attending surgeons, constitute a unique feature of this dispensary, and from the first have been exceedingly well received by the profession.

— At the last meeting of the County Medical Society, February 21th, a paper was read by Dr. Hermann Knapp on Acute Purulent Inflammation of the Middle Ear, its Occurrence, Causes, Symptoms, Duration, Termination, and Treatment, which was based on the experience derived from 182 cases studied in private and 382 cases observed in hospital practice. It was discussed by

Drs. Roosa, Agnew, Buck, Pomeroy, Sexton, and others. Dr. John C. Peters, chairman of the committee on the yellow-fever fund, reported that \$2550 had been sent to families of physicians in Memphis, Grenada, Nicholasville, Kentucky, and Highlands, North Carolina, and that the balance of the sum collected by the Medical Society of the County of New York amounted to \$866. The committee reported, in addition, that \$1726 had been sent to families of physicians who died in New Orleans by the New York Chamber of Commerce, at the suggestion of the chairman. Besides this amount, the Chamber of Commerce some time ago appropriated \$2500 to the County Medical Society's fund, and this, with \$250 received from the secretary of state, Hon. William M. Evarts, made the total balance in the hands of the committee \$3616.

— There is now on exhibition at Leavitt's art gallery a collection of drawings entered by architects from various parts of the United States, as well as Great Britain, in competition for a prize of five hundred dollars, offered by a number of gentlemen of this city for the best plan of a model house for working people, to be erected on an ordinary city lot of 25 x 100 feet. One hundred and eighty sets of drawings have been sent in, and the cost and general items of construction are shown in specifications and estimates attached to each. Most of the plans provide a stair-shaft independent of the building, and generally in brick, but in some cases these outer stairways are composed of iron.

— During 1878, 1606 cases were brought to Bellevue Hospital by means of the ambulances belonging to its service. Two ambulance-surgeons are constantly on duty, and they can be summoned by telegraph from any police-station or alarm-box of the fire department in the city. The alarm is received in the telegraph office on the first floor of the hospital, and thence transmitted simultaneously to the stables and the room of the surgeon, and however active the latter may be, the ambulance is usually at the door before he reaches the foot of the stairs. All the principal New York hospitals are now provided with ambulances, but of course the largest number of emergency cases are taken to Bellevue.

PHILADELPHIA.

— An argument in favor of compulsory vaccination is found in the fact that in this city, with nearly a million inhabitants, but where vaccination is general, there was not a single death last year from small-pox. Under the old *régime* the number of deaths should be at least a thousand annually, which would be greatly multiplied during an epidemic.

— The long-promised new work, *The National Dispensary*, has just been issued by Mr. Henry C. Lea, and reflects great credit upon its authors, Dr. Alfred Stillé and John M. Maisch, Ph. D., to whom the American medical profession is certainly greatly indebted for the painstaking and faithful manner in which they have performed their labor.

CHICAGO.

— The professorship of obstetrics and gynecology in Rush College has been divided. Professor Miller retains the department of obstetrics, while Prof. Wm. H. Byford steps into the new and independent department of gynecol-

ogy. Byford has taught obstetrics and gynecology for twenty years in the Chicago Medical College, — the last few years only gynecology, — and resigns his old position to accept the new one. No man is or has been so thoroughly identified with the growth and progress of gynecology in the West as Professor Byford; no man has done so much for it, or stands so high as a practitioner in this specialty, as he.

— Dr. A. Reeves Jackson has resigned his position as surgeon to the Woman's Hospital of the State of Illinois, as also have his assistant surgeons and the consulting staff. A new staff has been appointed, consisting of Drs. Byford, Nelson, Merriman, Roler, Flood, and Sawyer. The reason of the resignation of the old staff is said to be the difficulty experienced in getting along with the board of management of women. On the other hand, the board of management claim there is another side to the story. The institution is a small one, and is devoted to diseases of women exclusively. It is said to be in debt.

— Dr. E. W. Lee recently described at the West Chicago Medical Society a curious case of fracture of the neck of the femur in a boy twelve years old. The patient went about two or three days after the fracture occurred, feeling only a little lame from a fall he had received on the ice. Then he was prostrated with what was apparently inflammatory rheumatism, and had severe inflammation about the affected joint. On assuming charge of the case Dr. Lee only by accident discovered that there was extensive shortening, having at first taken the case to be one of inflammation of the hip-joint. Although several weeks had elapsed he got crepitation distinctly. He resorted to the weight and pulley. In a few days after the case was reported symptoms of cerebral meningitis began, and the patient has passed through a somewhat severe attack of this disorder, if indeed he can be said to be through it.

— In the competitive examinations for three internes for the County Insane Asylum and Poor-House Hospital, held a few days ago, the second place was awarded to a woman, Miss Moegeler, a member of the graduating class of the Woman's College. This is the first instance in Chicago of a place of this kind being won by a woman in an examination in competition with men.

BOSTON CITY HOSPITAL.

MEDICAL CASES OF DR. A. L. MASON.

[REPORTED BY DR. G. T. TUTTLE.]

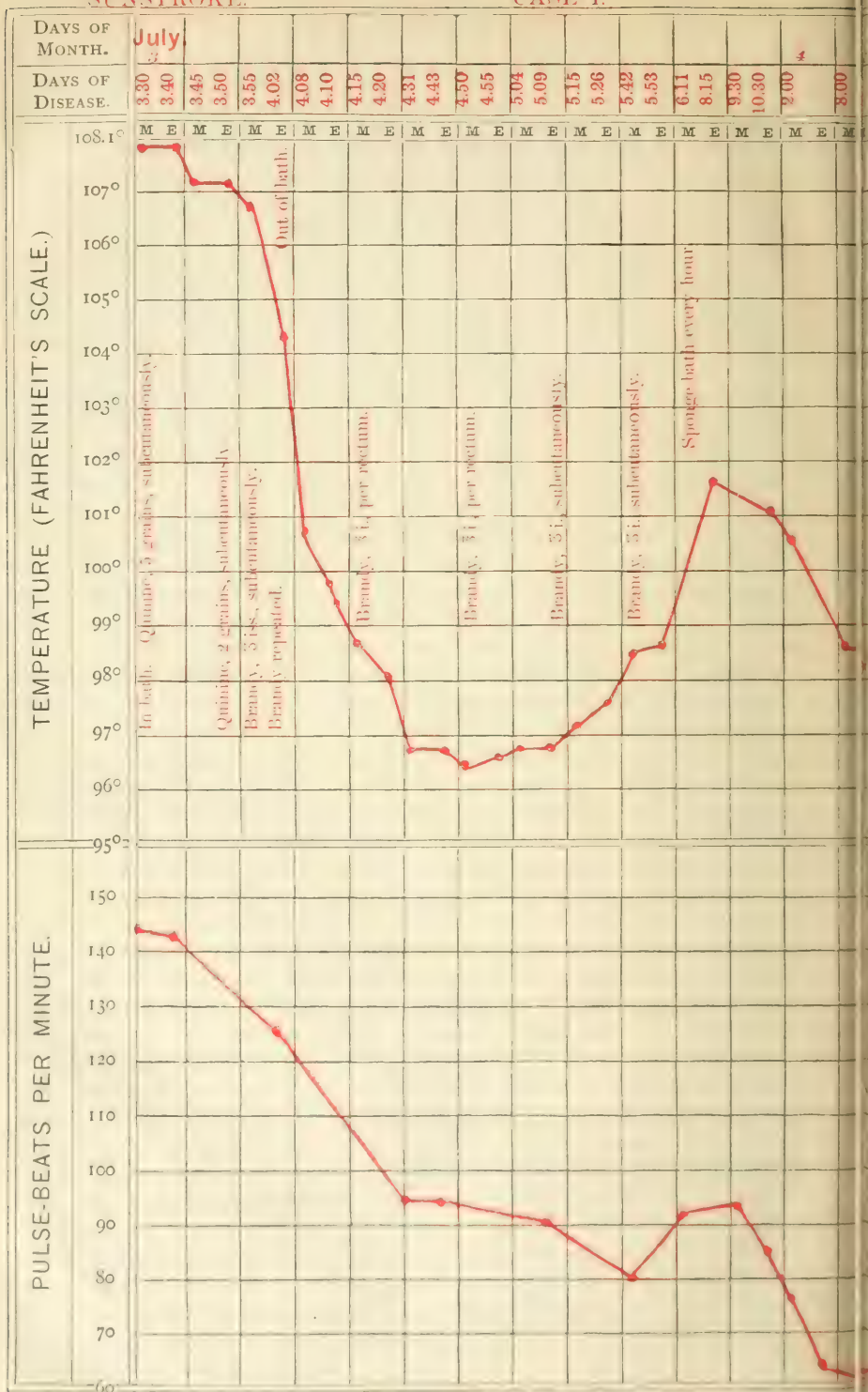
Sun-Stroke; Hyperpyrexia; Treatment by the Cold Bath. — CASE I. Thermic fever. W. B., aged forty-eight, a laborer in a sugar refinery, entered July 3d. He had been working during an exceptionally hot week in a room filled with steam. The day before entrance he complained of anorexia and thirst, drank considerable ice-water, and, on reaching home at night, three glasses in succession. After this perspiration ceased; he felt chilly and restless, and was unable to sleep, but had no headache. On the morning of entrance he went to work as usual, but though the atmosphere of the room was very warm he did not perspire, and was still chilly and felt weak.

At two o'clock, *p. m.*, he started for home, complaining of languor, vertigo, and nausea, but fell on the street, and was brought in by the police at 3.25 o'clock. At the time of entrance he was insensible, perfectly quiet, the face cyanotic, pupils contracted and not responsive to light, skin hot and dry. Pulse 144, bounding. Temperature 108.1° F. in the axilla. Respiration 30. He was immediately stripped and placed in a bath at 74° F., which was reduced to 70° F., and maintained at that point by ice. An ice-cap was applied to the head; he was given five grains of quinine subcutaneously, and in twenty minutes two grains more. At the expiration of thirty-two minutes from the beginning of treatment the temperature was still 104.2° F. in the rectum, but rapidly falling. Symptoms of collapse developed, although three drachms of brandy had been given subcutaneously in the preceding five minutes. He was at once removed from the bath. In twenty-nine minutes more the temperature had reached 96.4° F., in spite of two ounces of brandy by the rectum and one drachm subcutaneously, heaters, and blankets, making a reduction of 11.7° F. in one hour. An hour later the pulse was still weak, the respiration superficial, and the skin cyanotic; he soon vomited, however, and at once became conscious, complaining of abdominal pain, and that he was cold. At 8.15 o'clock the temperature was 101.6° F. Sponge baths were begun, and given each hour throughout the night. The next morning the man's only complaint was weakness, and in eight days he was discharged, well.

CASE II. T. D., aged forty-eight, a carpenter, entered the same day. For three days he had been working on the roof of a building in the hot sun, and began to feel badly the day before, his chief complaint being shortness of breath. The appetite had been fair. On the morning of entrance he went to work as usual, though he had some trouble in breathing and felt weak. He was thirsty, and drank freely, but the water was not iced. There was much perspiration in the morning, but none after dinner, when he had a bad frontal headache, languor, vertigo, and nausea. By three o'clock *p. m.* all objects seemed to him of a blue color. He finished the day's work, and started for home at six o'clock. He was brought in at seven o'clock. At the time of entrance he was insensible, had convulsive movement of limbs, labored and noisy respiration, flushed face, hot and dry skin; pupils not responsive to light. The pulse was 168, weak; the temperature 109.2° F. in the rectum. He was put into a bath at 76° F., which was reduced to 70° F. Five grains of quinine were given subcutaneously, and repeated in thirty minutes. There was an involuntary dejection. The bath lasted forty minutes, at the end of which time the temperature was 100.7° F. The same means for reaction were used as in the former case. At 8.10 o'clock the temperature was 96.2° F., a reduction of 13° F. in one hour and five minutes. At 8.30 o'clock the convulsive movements before mentioned had become so violent that two men held the patient on the bed with difficulty; he was partially etherized, after which there was no return. At 9.55 o'clock he vomited. In three and a quarter hours from the beginning of treatment he regained consciousness. At eleven o'clock the temperature was 100° F. Sponge baths were given as in the other case. The next morning he complained of headache, weakness, and aching of the limbs, and these were his only symptoms during convalescence. He was discharged, well, in seventeen days.

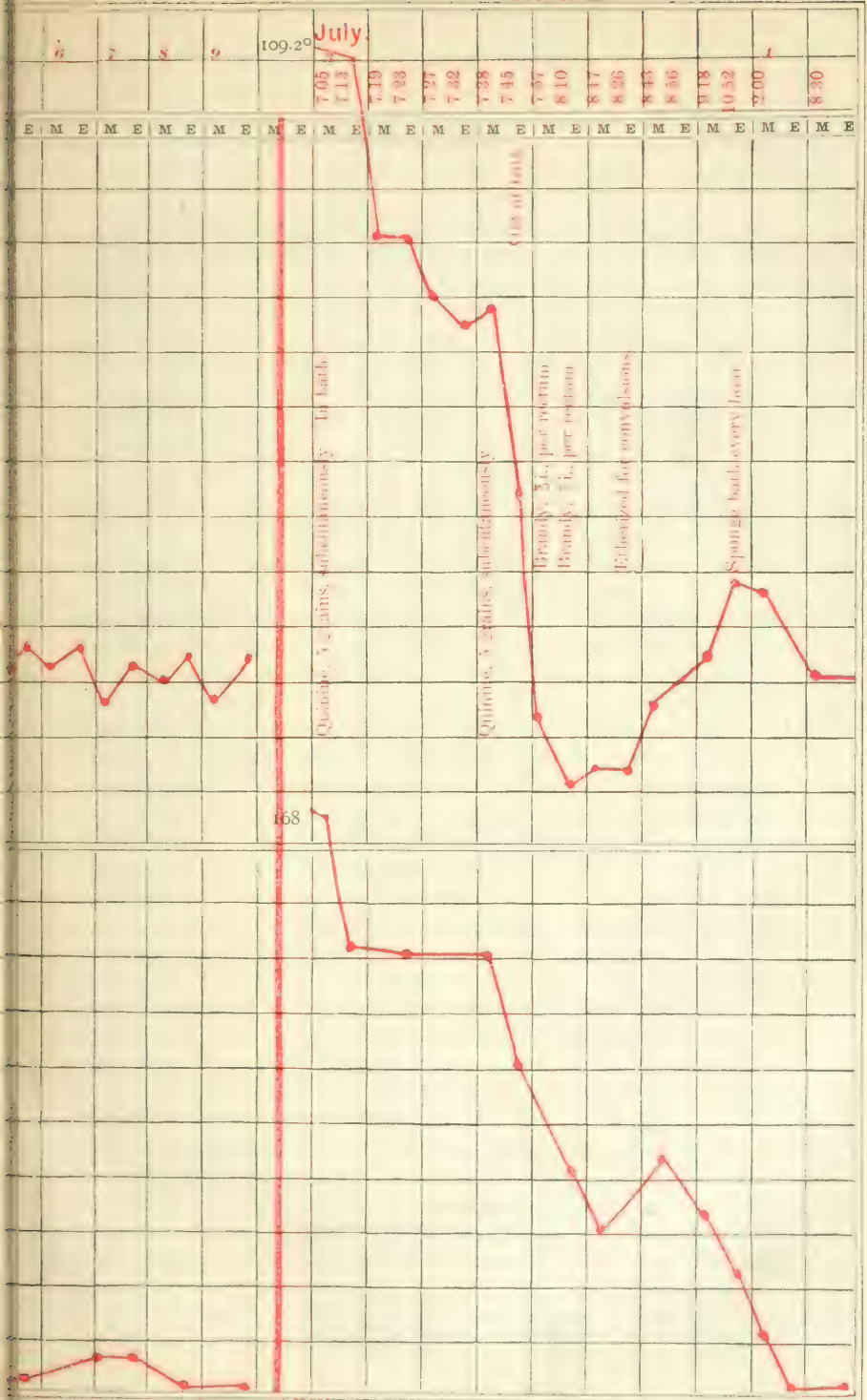
SUNSTROKE.

CASE I.



NOTE. — The letters M and E, at the top of the chart,

CASE II.



One omitted, as the hour is indicated by the figures above.

The following solution of quinine was used: —

℞ Quinine sulph.	3ij.
Acid lactic conc.	3ij.
Sodæ bisulphit	grs. iv.
Aquæ	ad 3i.
M. Miv. — gr. i.	

The bisulphite of soda is thought to render it unchangeable.

The hyperpyrexia and urgent symptoms in these cases placed life in imminent peril. The sthenic nature of an attack of sun-stroke in the early hours in many cases, and the absence of debility from previous illness, tend to render the collapse which follows so rapid an abstraction of heat less dangerous than that which occasionally occurs under similar circumstances in the treatment of typhoid fever. In the latter case reaction is readily brought about as a rule, and fatal collapse has been rare. Both patients were retained in the hospital longer than necessary, as a precautionary measure.

Colloid Cancer of Ovaries. — J. L., aged fifty-two, single, entered July 27th, and gave the following history: The catamenia began at the age of eleven and ceased at forty-one, having recurred with regularity. She was always well until three months before, when she had backache. At the end of a month she noticed swelling of the abdomen, which began on the right side; this occasioned her no particular inconvenience until within a month, during which period the swelling had rapidly increased, causing considerable discomfort from distention of the abdomen and pressure on the diaphragm. There had been œdema of the lower extremities for two weeks. Still the patient had worked until within three days of entrance. Appetite fair; bowels constipated; micturition painful. Pulse 100. Temperature 99.2° F. Abdomen largely distended; circumference at umbilicus forty-three and one half inches; not fluctuating. No enlargement of the uterus could be detected. On the 31st a small trocar was introduced half-way between the umbilicus and pubes in the median line. No fluid was obtained. The urine showed a trace of albumen, with granular and hyaline casts. August 7th. An aspirator was used by Dr. G. B. Shattuck, and a very small amount of thick colloid matter obtained, which under the microscope was seen to contain blood-vessels. A diagnosis of colloid cancer was then made. The patient gradually failed, and died on the 16th, twenty days after entrance. *Autopsy*, by Dr. E. G. Cutler. Body much emaciated. Abdomen enormously distended; right arch of diaphragm at second, left at third, intercostal space. In the abdomen were two tumors of unusual size, the right the larger, with thin, friable walls and colloid, bloody contents, which were degenerated ovaries. They were universally adherent, and secondary growths of recent origin covered the peritoneum everywhere. These growths were like masses of sago or tapioca, and on microscopic examination were found to be typical specimens of colloid cancer. The intestines were not remarkable, except that the cæcum was invaded by cancer externally, which had infiltrated the muscular wall. The other organs were normal.

Pelvic Tumor. — A. McD., aged eleven, entered August 23. About three weeks before, her parents noticed that she stooped, which they attributed

to carrying a weight, but in a few days, on account of pain, they detected a swelling in the lower part of the abdomen, which was tender on pressure. Since then she had had occasional attacks of abdominal pain, and had lost color, flesh, and strength. Appetite good. Bowels regular. At the time of entrance the abdomen was somewhat distended by a hard mass as large as a cocoa-nut, situated *chiefly on the left side*, and apparently arising from within the pelvis. There was no fluctuation. The circumference at the umbilicus was twenty-seven inches. September 5th. An aspirator was used by Dr. Shattuck, but nothing was obtained. For a few days after this the pulse and temperature were high, and morphine was required to ease the pain. September 16th. The patient was taken home by her parents. From the father it has since been ascertained that there was progressive enlargement of the abdomen, attended with great loss of strength and extreme emaciation; that œdema of the lower extremities appeared only two days before death, which occurred in November. No autopsy.

This case is reported in connection with the preceding one as a case of probable cancer of the ovary in a young subject, although such large and rapid new growths may have their origin in the mesenteric glands or in the omentum. The tumor did not appear to extend into the left lumbar region, as it would have done had the kidney been the diseased organ. The malignant nature of the affection was indicated by its rapid course, — less than four months in both cases.

Cancer of Stomach. — A. V., aged fifty-two, entered July 31st, with a history of fourteen months' illness. He first began to suffer from occasional distress in the epigastric and left hypochondriac regions, which for ten months had been so constant and severe as to interfere with sleep. From the physician who was called in January it was ascertained that the urine then contained sugar but no albumen or casts, and that the blood showed fifty per cent. diminution of red corpuscles. Under treatment with dialyzed iron and a mild aperient, by May there had been a gain of twenty-five per cent. in red corpuscles, and by June it was found to be well up to the normal standard, but for a month before entrance he had failed rapidly. At the time of admission, in addition to the pain before spoken of, he complained of anorexia, constipation, and occasional nausea and vomiting. He had a peculiar ashy complexion. There was considerable emaciation, and tenderness at the epigastrium. Nothing worthy of note occurred till August 17th, when he had a tarry defecation. September 1st, dysentery began, which continued till death, on September 26th. The treatment consisted of tonics, stimulants, opiates to ease the pain, and as nourishing a diet as the patient could take. At the last all solid food caused distress, and usually vomiting. *Autopsy*, by Dr. Cutler. Organs generally anæmic. The stomach was filled with a sour-smelling, dark-colored fluid, in which floated small particles of food. There was an ulcerated mass of new growth about the size of a hand on the smaller curvature of the stomach, rather near the pyloric end. On section of the new growth numerous sago-like bodies were discovered in a network of connective tissue; the mass was cancerous. There were secondary deposits in the liver. The kidneys were cloudy in parts of the cortex. The large intes-

tine from just below the cæcum was found to be the seat of an extensive ulceration, which had begun to cicatrize at the lower portion while it was progressing above. The other organs were healthy. Brain not examined.

This case was noticeable for the absence of a perceptible tumor at the epigastrium, owing to the situation of the growth. There was great pain, however, in that region. The vomitus was not characteristic. For an account of a similar case reported by Dr. Louis Starr, see Proceedings of the Philadelphia Pathological Society, vol. vii., page 17.

SHORT COMMUNICATIONS.

DR. JOSEPH L. STEVENS.

DR. JOSEPH L. STEVENS died quietly at his home in Castine, Maine, February 19, 1879, of pneumonia. He was born in Gloucester, Mass., in 1790, and was consequently in his eighty-ninth year at the time of his death. He was a graduate of one of the earliest classes of Phillips Academy, Andover, where he fitted for college. He graduated from Harvard in 1810, and from the medical school of that university in 1814. This same year he went as surgeon on the privateer *Yankee*. He attended his first course of medical lectures while still an undergraduate of the academical department of Harvard, — the lectures then being given at Cambridge. His second course was taken in Boston in 1814, in the upper room of a store on Washington Street. This was probably the first year that the lectures were given in Boston. He heard the first lecture given by Dr. John C. Warren, as well as many of those of the elder Dr. Warren.

Dr. Stevens practiced for two years in Trenton, Maine, and then, in March, 1819, settled in Castine. He was therefore a resident of that town for very nearly fifty-nine years. Although for ten years past, owing to his age and infirmities, his practice has been very limited, yet he cannot be said ever to have withdrawn entirely from practice. When Dr. Stevens settled in Castine the roads were few and poorly constructed, and he made his professional calls on horseback, often traveling across pastures and fording brooks. For forty years his practice was very extensive, extending over a radius of at least thirty miles. Wherever he was known he was recognized as a man of culture and refinement. He possessed an active, vigorous mind and a retentive memory. Although the claims of his profession, to which he was ardently attached, received his first attention, yet he was not neglectful of other studies, and kept up some acquaintance with the classics and belles-lettres. He was an excellent citizen, and a kind and considerate husband and father. Though in no sense a politician, he nevertheless took a great interest in national affairs, especially during the years of the late war, and never hesitated to give utterance to his convictions. In the practice of his profession Dr. Stevens not only gave an unusual degree of satisfaction to his patrons, but he was recognized by his *confères* as possessing good powers of diagnosis and sound judgment. He made surgery somewhat of a specialty, and kept up his interest in this, as well as in medical matters, to the very last. When eighty-two years of age he performed an amputation of the thigh neatly, quickly, and successfully. He was at one time, if we mistake not, a member of the Massachusetts Medical Society. He was the first medical man in Hancock County to administer sulphuric ether. He was for many years a subscriber to the *JOURNAL*, to the pages of which he sometimes offered his contributions. During the last year of his life he borrowed and read several new medical works, and a fortnight before his death he displayed a good deal of intelligent interest in regard to a case of aneurism of the thoracic aorta, about which he had been informed by the writer.

But far beyond any desire for pecuniary returns did Dr. Stevens cherish his profession. He had for it not only a truly scientific zeal, and a hearty detestation of any approach to quackery, but above all he loved it also for the opportunity it gave him of serving his fellow-men. As a sympathetic, whole-souled, kind-hearted, and generous, though an impetuous and sometimes irritable man, he will long be remembered. As an evidence of his kindness, it is told of him that on one occasion he was called to attend a poor woman in child-bed, in

midwinter, and found her alone, without any fire or sufficient covering. He at once deprived himself of all the garments he could possibly spare to cover her with, broke up the fence-rails for fuel, and stayed by her until she was out of immediate danger. During his absence he lost two or three paying patients, who were obliged to send for other physicians. He never refused a case if able to go, no matter who the patient or what the case might be.

His death, though not unexpected, greatly affected the community in which he lived. He will long be remembered not only by his townsmen, but by very many of his brother physicians. He leaves a wife and five children. The latter are all grown up and settled in life, one of them, Dr. George B. Stevens, residing in Gloucester, the place of his father's nativity.

A NEEDFUL CHANGE.

THE death of the late Surgeon-General Woodworth, of the marine hospital service, leaves that department without a head. This seems a favorable time to effect a transfer of that partially developed service to the navy department. Such a change would place it under the management of efficient naval medical officers who have had years of experience in medical and military treatment of sailors. Supposing it were not possible to transfer the service, medical officers of the navy should at least be placed in charge of the hospitals. The coast survey is under the management of the treasury department, yet every vessel is officered by line officers of the navy, and the efficiency of that service is due entirely to them. It might with justice be asked, What is to become of those medical officers now constituting the marine hospital service? They are upon exactly the same relative footing as the volunteer officers of the navy or the contract surgeons of the army. Those of the navy are to be mustered out by the 1st of July, with one year's pay. The same disposition should be made of these gentlemen.

EFFICIENCY.

AN ACT

TO PREVENT THE INTRODUCTION OF INFECTIOUS OR CONTAGIOUS DISEASES INTO THE UNITED STATES, AND TO ESTABLISH A NATIONAL BOARD OF HEALTH.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be established a National Board of Health, to consist of seven members, to be appointed by the president, by and with the advice and consent of the senate, not more than one of whom shall be appointed from any one State, whose compensation, during the time when actually engaged in the performance of their duties under this act, shall be ten dollars per diem each and reasonable expenses; and of one medical officer of the army, one medical officer of the navy, one medical officer of the marine hospital service, and one officer from the department of justice, to be detailed by the secretaries of the several departments and the attorney-general respectively, and the officers so detailed shall receive no compensation. Said board shall meet in Washington within thirty days after the passage of this act, and in Washington or elsewhere from time to time upon notice from the president of the board, who is to be chosen by the members thereof, or upon its own adjournments, and shall frame all rules and regulations authorized or required by this act, and shall make or cause to be made such special examinations and investigations at any place or places within the United States or at foreign ports as they may deem best to aid in the execution of this act and the promotion of its objects.

SEC. 2. The duties of the National Board of Health shall be to obtain information upon all matters affecting the public health, to advise the several departments of the government, the executives of the several States, and the commissioners of the District of Columbia on all questions submitted by them, or whenever in the opinion of the board such advice may tend to the preservation and improvement of the public health.

SEC. 3. That the Board of Health, with the assistance of the Academy of Science, which is hereby requested and directed to cooperate with them for that purpose, shall report to Congress at its next session a full statement of its transactions, together with a plan for a national public health organization, which plan shall be prepared after consultation with the principal sanitary organizations and the sanitarians of the several States of the United

States, special attention being given to the subject of quarantine, both maritime and inland, and especially as to regulations which should be established between state or local systems of quarantine and a national quarantine system.

Sec. 4. The sum of fifty thousand dollars, or so much thereof as may be necessary, is hereby appropriated to pay the salaries and expenses of said board, and the further sum of five hundred thousand dollars, or so much thereof as may be found necessary, to carry out the purposes of this act.

Approved March 3, 1879.

THE INSANE.

MR. EDITOR, — A criticism upon the Tremont Temple meeting appears in a recent number of the *JOURNAL*, the personal part of which seems hardly in good taste. I am not responsible for having been undeservedly introduced by a friend as "a gentleman who distinguished himself in the trial of Captain Holm," but I am responsible for a statement of law made in a few remarks there. The *practice*, which has recently grown up, of sending private patients to state asylums was not alluded to, but I did state, and correctly, the *law* which regulates the commitment of pauper and private patients, as the writer of that article will see by referring to the act of 1862, chapter 223. I do not seek to avoid the responsibility for the article in the *Advertiser* of August 15th in relation to commitments, which was signed C. G. F., and which is the only article I have written for the press lately, nor a part of the responsibility for the public discussion of the subject of insanity and the need of further legislation. This course seemed to be the only one left. Public discussion seemed necessary. Year after year others had tried another way, but successive legislatures have declined to act. Nothing remained to the friends of this cause but to enlist the attention of the governor and legislature by public discussion and other means. They believed that an evil practice had grown up through the laxity of the laws. They of course held the medical profession in the highest estimation, but they thought that some members of it had been in some cases either too careless and obliging, or deficient in judgment or character, and that some additional safeguard should surround society. The authority vested in your profession was as great as the power of the Star Chamber; they could do more than confine people by means of an *opinion*. The only safeguard against an abuse was in your character and good judgment. Surely no one will deny that all men are liable to err in judgment, and every one must regret that there are black sheep in all the professions. The *JOURNAL* is devoted only to the discussion of medical questions, I believe, but if you will have the kindness to insert this you will do an act of justice to people who in the conduct of a good cause may have erred in judgment, but have obeyed what they thought was the law of necessity. Perhaps they have done good in pointing out some of the evils of asylum treatment.

CHARLES G. FALL.

[We did not state the facts regarding the committal of insane persons to asylums without being familiar with the law, or without having had eminent legal advice as to its interpretation. The statute provides that "any . . . may commit," etc. Private patients and town paupers are constantly committed to state asylums without any action of the court; there is nothing in the law to make it illegal to do so, and there is no discrimination in the law between the various kinds of asylums. We have frequently pointed out the necessity for a change in our general treatment of the insane, but in saying that the Tremont Temple meeting has been productive of as much harm as good we express our opinion with regard to it in mild terms. — EDITOR.]

SUBPERIOSTEAL RESECTIONS.

MR. EDITOR, — I perused with much interest Dr. Bradford's article on Subperiosteal Resection of the Tibia in the *JOURNAL* for January 30th. In *Braithwaite's Retrospect* for January, 1862, an account is given of the removal of the entire tibia, resulting in a perfect limb in six months. This operation was in August, 1855, by M. Maisonneuve (Paris). M. Velpeau

and other eminent French surgeons had advised amputation. The result was the most perfect of any that I have seen the account of; the articular portions of the bone only were not removed.

I aided in the removal of a humerus, except the lower articular extremity merely, just prior to the appearance of that number of *Braithwaite*. The patient was a lad sixteen years old, from Henry County, Ill. He was in Rock Island for the surgical advice of Dr. Farrell, who deemed an operation necessary. It was in December, 1861, or January, 1862. The bone was curious its entire length, including the head, but not the lower articular part, which, as I said, was not removed. It was enucleated, as it were, from its thickened periosteum. In less than three months the patient was driving a span of horses in the streets, using both hands quite well. I left for the East April 7, 1862, and noticing this young man in the car went over to him and examined the limb. He could swing it back and forth perfectly, elevate it a little, but the power of the deltoid seemed imperfect, and the round contour of the shoulder was gone. Dr. Truesdale subsequently advised me by letter that the young man gained power of elevation of the arm. I must think, however, that this function never could be fully restored. At the same date Dr. Truesdale had a case of compound fracture of the tibia, in which a section of it came out of about an inch in length, as I remember. My impression is that the fibula was not broken. I am quite sure Dr. Truesdale's letter states that the loss to the tibia was made up without the least deformity or lameness, — reproduced from the still healthy periosteum. I am not aware that Dr. Farrell's case of removal and restoration of the humerus ever found its way into print. He has a surgical reputation of wide extent in that section of the country, and well earned. If he chose to give us some of his experience it would be of no small benefit.

PAWTUCKET, R. I.

Very truly yours,

J. O. WHITNEY.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 8, 1879.

Cities.	Population estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 10.0 during the Week.	Percentage of total Deaths from					
				The Principal "Zymotic" Diseases.	Pneumonia.	Diphtheria and Group.	Scarlet Fever.	Diarrheal Diseases.	
New York.....	1,085,000	555	26.67	22.34	11.53	5.23	10.81	1.98	
Philadelphia.....	—	311	—	—	—	—	3.22	—	
Brooklyn.....	564,400	230	23.78	17.83	12.17	4.78	9.56	—	
St. Louis.....	—	108	—	8.33	12.96	0.92	—	1.84	
Chicago.....	—	165	—	10.87	5.45	5.45	—	1.81	
Baltimore.....	365,000	140	20.00	13.57	12.14	7.86	5.00	—	
Boston.....	356,500	162	23.70	11.11	11.73	4.32	1.85	0.62	
Cincinnati.....	—	—	—	—	—	—	—	—	
District of Columbia...	160,000	81	26.30	12.34	12.34	6.17	9.87	—	
Pittsburgh.....	—	61	—	19.67	6.56	9.84	—	1.64	
Milwaukee.....	—	42	—	19.05	14.29	9.53	—	—	
Providence.....	101,000	37	19.06	18.92	18.92	8.11	8.11	—	
New Haven.....	—	—	—	—	—	—	—	—	
Charleston.....	—	21	—	4.76	14.28	—	—	—	
Lowell.....	53,300	16	15.65	12.50	37.50	12.50	—	—	
Worcester.....	52,500	21	20.85	9.52	9.52	9.52	—	—	
Cambridge.....	51,400	22	22.31	22.73	4.55	9.09	9.09	—	
Fall River.....	48,500	—	—	—	—	—	—	—	
Lawrence.....	38,200	—	—	—	—	—	—	—	
Lynn.....	34,000	13	19.94	15.98	—	15.38	—	—	
Springfield.....	31,500	7	11.59	14.29	28.37	—	14.29	—	
New Bedford.....	27,000	—	—	—	—	—	—	—	
Salem.....	26,400	16	31.60	18.75	12.50	12.50	6.25	—	
Somerville.....	23,350	4	8.93	25.00	—	—	—	25.00	
Chelsea.....	20,800	7	17.55	28.57	—	14.28	14.28	—	
Taunton.....	20,200	7	18.07	—	14.28	—	—	—	
Holyoke.....	18,200	9	25.79	33.33	—	22.22	11.11	—	
Gloucester.....	17,100	5	15.25	20.00	20.00	20.00	—	—	
Newton.....	17,100	5	15.25	—	20.00	—	—	—	
Haverhill.....	15,300	7	23.86	42.86	14.28	42.86	—	—	
Newburyport.....	13,500	6	23.17	16.67	—	—	—	—	
Fitchburg.....	12,500	4	16.68	—	—	—	—	—	

Two thousand and sixty-two deaths were reported (excluding Cincinnati and New Haven): 293 from consumption, 210 from pneumonia, 123 from scarlet fever, 88 from bronchitis, 72 from diphtheria, 41 from croup, 36 from whooping-cough, 22 from typhoid fever, 19 from diarrhoeal diseases, 14 from erysipelas, 10 from cerebro-spinal meningitis, one from measles, none from small-pox. The increase in the total mortality is slight; from scarlet fever and whooping-cough considerable; from cerebro-spinal meningitis, diphtheria and croup, and diarrhoeal diseases a decided decrease; pulmonary diseases, erysipelas, and typhoid fever remain about the same. There is a marked decrease in fatality from pulmonary diseases in Providence, Philadelphia, Charleston, and somewhat in New York, and a decided increase in Boston and the District of Columbia.

From *bronchitis*, 41 deaths were reported in New York, 14 in Brooklyn, nine in Chicago and Pittsburgh, six in District of Columbia, four in St. Louis, two in Baltimore, one in Milwaukee, Providence, and Charleston. From *whooping-cough*, 17 in New York, six in Brooklyn, four in Cincinnati, three in District of Columbia, two in Boston and Milwaukee, one in Chicago. From *typhoid fever*, seven in Philadelphia, three in Boston, two in Brooklyn and Chicago, one in St. Louis, Baltimore, District of Columbia, Milwaukee, Providence, and Charleston. From *erysipelas*, four in New York and Pittsburgh, two in St. Louis, Chicago, and Boston. From *cerebro-spinal meningitis*, four in Cincinnati, two in St. Louis, one in New York, Chicago, Milwaukee, and Cambridge. From *measles*, one in Pittsburgh. There was one death from *malarial fever* in Baltimore and District of Columbia, one from *relapsing fever* in Baltimore, one from *trismus nascentium* in Charleston and Baltimore. In the District of Columbia the death-rate was 18.64 among the whites and 41.41 for the colored population. Nashville is quite free from zymotic diseases. In Cleveland diphtheria, scarlet fever, and pulmonary diseases prevail; in Pittsburgh measles on the "South Side;" in Buffalo scarlet fever and especially diphtheria; in Louisville pulmonary diseases; in San Francisco, diphtheria and pulmonary diseases; in New Orleans, pulmonary diseases, and to a moderate extent malarial fever. Small-pox is in Havana, and a few cases of yellow fever; the latter disease is reported to the marine hospital department as being absent from our Southern States. The returns from sixteen of the nineteen cities of Massachusetts, with a population of 763,550, showed a decreased mortality from diphtheria, croup, and cerebro-spinal meningitis; about the same from typhoid fever and diarrhoeal diseases; increased from the other "zymotic" and from pulmonary diseases.

Sergeant Purcell's meteorological record for the week, in Boston, is as follows:—

Date.	Barom-eter.	Thermom-eter.		Relative Humidity.			Direction of Wind.			Velocity of Wind.			State of Weather.			Rainfall. (Melted Snow.)			
	Daily Mean.	Daily Mean.	Minimum.	Maximum.	7 A. M.	2 P. M.	9 P. M.	Daily Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration in Hours.	Amount in Inches.
March 2	30.473	31	37	28	78	45	57	69	NW	NW	W	9	9	4	F	F	C	—	—
" 3	30.448	28	36	25	62	61	72	63	N	E	S	8	10	8	F	C	C	—	—
" 4	30.299	29	47	24	83	55	83	77	S	SW	SW	8	14	16	O	F	C	—	—
" 5	30.438	31	46	19	71	39	45	51	W	N	NW	9	20	14	F	F	C	—	—
" 6	30.216	25	35	12	73	100	89	87	N	S	S	7	12	6	F	S	S	9.5	.15
" 7	30.076	24	35	20	84	61	71	72	W	NW	N	14	28	17	C	F	C	—	—
" 8	30.372	25	33	15	75	48	54	59	N	E	O	11	5	0	F	C	C	—	—

Weekly Summary.	Barometer.	Thermometer.	Humidity, Saturation being 100.	Wind.	Rain.
	Mean 30.360	Mean 29.6	Mean 67.6	Total miles traveled, 1933.	Total amt. .15 in.
	Max. 30.675	Max. 47	Max. 100		
	Min. 29.817	Min. 12	Min. 39	Prevailing direction, S.	Duration, 9 hrs. 30 min.
	Range .858	Range 35	Range 61		

Barometer corrected for temperature, elevation, and instrumental error.

Explanation of weather symbols: O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., snow; L. S., light snow; T., threatening.

Station: Latitude 42° 21'; longitude 71° 4'; height of instrument above the sea, 77.5.

For the week ending February 15th, in 149 German cities and towns, with a population estimated at 7,549,967, the death-rate was 26.4, a decrease of 0.2 from the previous week. For the empire, typhus fever alone of the "zymotic" diseases had increased; measles had lost its epidemic character, except in Frankfort-on-the-Main and Gladbach; scarlet fever was milder, except in Dantzic, Stettin, Ratibon, and Hanover; the total mortality from diphtheria was a trifle less, although increased somewhat in Berlin, Breslau, Augsburg, Bremen, Dantzic, and Chemnitz; typhoid fever was more prevalent in Posen alone; diarrhoeal diseases remained about the same; consumption was less fatal, and acute pulmonary diseases more so. Five hundred and fifty-four deaths were reported from consumption, 510 from acute pulmonary diseases, 156 from diphtheria and croup, 115 from diarrhoeal diseases, 75 from scarlet fever, 64 from whooping-cough, 43 from typhoid fever, 42 from suicide, 32 from puerperal fever, 28 from measles, eight from typhus fever, none from cholera or small-pox. The death-rates ranged from 14.3 in Stuttgart to 39.5 in Augsburg; Dantzic 27.2; Kiel 20.8; Breslau 27.5; Munich 30.5; Dresden 22.2; Cassel 25.7; Erfurt 25.1; Berlin 25.8; Leipsic 19.6; Hamburg 24.3; Hanover 18.4; Bremen 21.5; Cologne 30.4; Frankfort-on-the-Main 25.1; Wiesbaden 25.5.

For the week ending February 22d, in the 20 English cities, having an estimated population of 7,269,976, the death-rate was 25.6, an increase of 0.5 from the previous week: in London 23.7; Portsmouth 16.6; Birmingham 22.8; Leicester 17.0; Liverpool 36.1; Manchester 39.4; Leeds 28.1. There were in all the cities 489 deaths from diseases of the respiratory organs, 139 from whooping-cough, 99 from scarlet fever, 38 from fever, 32 from diarrhoeal diseases, 28 from measles, 17 from small-pox (all in London), and 15 from diphtheria.

Small-pox is still very prevalent in Dublin, Budapesth, Paris, Barcelona, and especially in St. Petersburg, decreasing in Vienna; a few cases are reported in Geneva, Warsaw, and Venice. The plague is reported as having disappeared, but a malignant form of typhus fever is reported in Russia and Turkey. Strict quarantine regulations are observed in the ports of the Mediterranean and in those countries having land communication with Turkey and Southern Russia. Efforts are making to improve the sanitary condition of the towns, especially in Eastern Europe. The German government have published elaborate regulations regarding quarantine and "disinfection."

BOOKS AND PAMPHLETS RECEIVED. — *Epitome of Skin Diseases, with Formulæ for Students and Practitioners.* By Tilbury Fox, M. D., F. R. C. P., and T. C. Fox, M. B., B. A. (Cantab.) Second American Edition, enlarged and revised by the Authors. Philadelphia: Henry C. Lea. 1879. (From A. Williams & Co.)

Evolution and Human Anatomy. By Stanford E. Chailié, A. M., M. D. (The Medical Record.) 1879.

Nineteenth Annual Report of Medical Superintendent of the State Asylum for Insane Criminals, Auburn, N. Y. Albany. 1879.

First Annual Report of the State Board of Health of the State of Connecticut. Hartford, Conn. 1879.

On the Elective Action and Small Doses of Medicine, with Illustrative Cases. By Thomas J. Mays, M. D. 1879. (New York Medical Journal.)

The Therapeutic Value of Ergot. By J. W. Compton, M. D. (Detroit Lancet.)

Changes in the Globular Richness of Human Blood. By E. G. Cutler, M. D., and E. H. Bradford, M. D., Boston. (Reprint from the Journal of Physiology.)

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ABSTRACT OF AN ADDRESS ON MEDICAL EDUCATION.¹

BY ALFRED MERCER, M. D.,

Professor of Minor and Clinical Surgery in Syracuse University.

MR. PRESIDENT AND GENTLEMEN OF THE COUNCIL: The first medical college in this country was organized in 1765, in Philadelphia, by Drs. Morgan and Shippen. It was abandoned, however, during the revolutionary struggle, but was reorganized in 1783. Three other colleges were established — Harvard, King's College, New York, and Dartmouth — before the close of the eighteenth century. The curriculum as to time and mode of teaching established by these early colleges has not been materially changed to this day, save, perhaps, only in the way of a retrograde movement. Then, a good English education with some classical and scientific knowledge was required of the student; now, nothing. Then, as now, three years of study, — some authorities say four, — and the attendance on two courses of lectures, from two to four weeks longer now than then, were the prerequisites of a candidate for graduation.

At that time many important branches of medical knowledge were almost unknown to the profession. Anatomy was imperfectly taught; physiology and organic chemistry were in their infancy; little attention had been paid to diseases of the eye and ear, or to the diseases of women and children; the chemistry of the urine was not understood, and as a consequence we knew little of the diseases of the kidneys; nothing was known of physical diagnosis of the diseases of the heart and lungs, itself a study of months; little was known of the nervous system or its diseases, and nothing of electricity in their diagnosis and treatment. Sanitary science, histology, and the use of the microscope in medicine have opened up new and important worlds to the student of medicine, — all children of the present generation. What additions have been made to our *materia medica*, and what knowledge have we gained of the physiological and therapeutical action of drugs! Surgery, under anæsthetics, has pushed its domain far beyond the most sanguine dreams of our

¹ An Address presenting the Claims of the Medical Department. Read before a "Council" in the Interests of Syracuse University, held at Syracuse, N. Y., December 18, 19, 1878.

fathers, and still the end of the advance of medical knowledge, of the appliances and inventions introduced during the last century, is far from being reached. The field of medical inquiry has doubled, if not trebled, in the last hundred years, and yet no more time has been allotted to or required of the student to learn his task. The student then had little to do, or he is greatly overworked now, or his work is not half done. How inconsistent to continue such a system!

At an early day in the history of medical education in this country the many imperfections of the system were distinctly pointed out and deprecated, and were tolerated only because of the sparseness of the settlements and the general poverty of the students and the country. The people needed doctors, even though they were too poor to pay a well-educated profession. But we have outgrown all this. There is no longer any excuse in this direction for an indifferent medical education. As a nation we are rich. No people on the face of the globe are so well fed, clothed, and housed, or enjoy so much of this world's goods, as the people of this country. We are certainly rich enough to ask for the best possible medical profession, and an occasional consulting fee of five hundred dollars ought to satisfy the cupidity of the highest culture.

To ordinary intelligent thought, if medical science can be presented in a sixteen or twenty weeks' course of lectures, the science would seem to be but little more than a bubble. And yet this is what our medical colleges aim to do. It is true that they give from six to seven hours' talk a day. This, to most minds, would appear more like confusion than knowledge. But the same lectures are repeated winter after winter, with slight variations, and they ought to be listened to for three or four winters to be properly learned and digested.

The world is moving on the subject of hygiene in our public schools; but what is the hygiene of our medical schools, the place above all others where we ought to look for the observance of sanitary law? What law of educating the mind do medical colleges obey? or, rather, what law do they not disobey? But with all possible crowding they must fail to do justice to medical science in a twenty weeks' course of instruction.

As a nation we may be abreast or in advance of other countries in our free public schools and the general intelligence of our people, but in the matter of medical education — an education fraught with so much interest to us all, the preservation of our own lives and the lives of our loved ones, the most choice blessings and gifts of earth — we are far behind every other enlightened nation on the globe, and even behind nations that we are apt to think of as half-civilized. Not that we have not many eminent physicians and surgeons, self-made men, far beyond the culture of the schools, an honor to the profession and country, and to whom the world is indebted for many important discoveries that give

to the profession of the country a world-wide reputation. It is not the head and front of the profession to whom we refer, but to the ordinary graduate as he comes from college under our system of instruction and methods of granting degrees, and who still has a heavy percentage of work to do to acquire a good medical education.

We have already stated that the time of study in this country is three years. Now in Canada and Great Britain the time of study is four years, and from eight to nine months in each year are to be spent in college and in attendance on hospital practice. A good preparatory education is required; the studies are graded, with frequent examinations for advancement, the examinations being conducted outside of the teaching faculties. All this, however, does not apply to Canada. Germany and France require near five years of study; in the Austro-Hungarian empire, Italy, Portugal, Russia, Australia, Belgium, and Denmark five years are compulsory; while in Holland, Chili, Brazil, Cuba, and Venezuela six years of study are thought to be necessary to qualify one to practice medicine; and still longer periods are required in Norway and Sweden. In all those countries a suitable general education is requisite, with frequent examinations for advancement to higher classes; the studies are graded, so that the student is not studying everything at once. American medical education in want of thoroughness, system, and order presents a humiliating picture when compared with the education of the nations of the Old World, as well as with those of the New. But let us look a little into the workings of this cheap medical education, — cheap in time and acquirements.

Our colleges are overstocking the market with their three thousand graduates a year, a heavy percentage of whom finally abandon the profession with disappointed hopes, and devote their energies to some other more lucrative employment. From the cheapness of American diplomas, and from the few unenforced legal restrictions on the practice of medicine, with or without a diploma, and without any known qualifications whatever, we have one doctor to every six hundred inhabitants, while a few miles from here, just over the Canadian border, they have only one to 1200 inhabitants, while in Great Britain there is but one to 1672.

France has one to		1814
Germany has one to		3000
Belgium has one to		2048
Austria has one to		2500
Italy has one to		3500
Norway has one to		3480

Thus we have two doctors in the United States to one in Canada, nearly three to one in Great Britain, more than four to one in France, and five to one in Germany. The just relative proportion of doctors to population has been variously estimated at from one in 1500 to one

in 2500. The present average of the civilized world would probably fall within these limits.

The number of doctors in a country does not seem to be altogether regulated by the law of supply and demand, but by the standard of education. As the educational standard lowers, numbers increase; as it rises, they decrease. In Great Britain for the last twenty years prior to the present decade the proportion of doctors to population has been on the decrease. It has been thought that the exacting examination for a license to practice deters many young men from entering the profession. If this is the true cause there would seem to be a law of limit to a higher culture, beyond which it could not be carried without detriment to the public good; but as our supply is so much in excess of the demand, double that of every other country, there can be no danger of a scarcity of doctors here if a substantial advance is made in the requirements for graduation.

Medical colleges have multiplied in this country from four in 1800 to eighty in 1875. Sixty-five are teaching rational medicine, eleven are homœopathic, and four are eclectic. This would seem to be an unwarrantable increase of colleges, certainly so as they are now conducted; however, numbers would not matter so much if their students were to be examined by an independent board for a license to practice.

In proportion to population, we have one medical school to one in Canada; two to one in Great Britain; three to one in Belgium, Germany, Italy, Norway, and Sweden; twelve to one in Austria, Brazil, and France; and as far as we have any information on the subject there is annually one graduate in medicine in the United States and Canada to 15,000 inhabitants, one to 18,000 in Great Britain, one to 48,000 in France, and one to 68,000 in Germany.

And yet, as already stated, we have two doctors to one in Canada, and nearly three to one in Great Britain. This would look as though less than half of our physicians came from the colleges. In a single foreign medical journal, in the matter of medical statistics, in the matter of college management, the number of students in attendance, the character of the examinations, the number of successful and unsuccessful candidates, and the general condition and progress of medical education and the profession, may be found more information on all these subjects in Great Britain and several continental powers than can be found in all the medical journals of this country, as far as my knowledge extends, on like matters of interest to the profession. Unfortunately, we have no cosmopolite journal, national in its character, that throws its arms alike, and for the best interest of all, around the student, the college, the profession, and the people. The colleges for the most part are closed books, and the profession has no ready means of becoming acquainted with itself.

In general, competition improves the quality of the product. The reverse is the case with medical schools, as shown in the falling off of the classes in all the colleges that have raised the standard of education. Harvard's classes shrink on the new plan of a three years' graded course of instruction and a lengthened college year of nine months, notwithstanding her age, prestige, and influential alumni. The average medical student "takes no stock" in a higher medical education.

The attorney is examined to practice in the courts and the divine to enter the pulpit, but we have an army of doctors practicing without the semblance of a sheepskin, — wolves in sheep's clothing, preying on the lambs of the flock. It is believed there are medical signs in this city now that represent nothing but ignorant criminal abortion.

The State of Illinois passed a law, which took effect July 1, 1877, establishing a state board of health, with power to act as a state board of medical regents. In one year this board "examined three hundred and sixty-six applicants for the license to practice, and rejected two hundred and twenty-one of them; it has driven one thousand two hundred unqualified practitioners out of the State; has stopped eight colleges from giving two graduating courses in one year; has refused to accept or to recognize the diplomas of eight medical schools; and has revoked six certificates for gross unprofessional conduct."

In this rapid multiplication of schools the Syracuse University has not been guilty of inflicting on the country another new school of the old sort. Your medical department is an old school, — Geneva Medical College, moved to Syracuse, organized about 1838, when there were but seventeen schools in the country. Four of the old professors still fill chairs in the college faculty.

From the inception of its removal, and in its first annual announcement in 1872, an optional three years' graded course of instruction was inaugurated, with a college year of nine months, of which but few students took advantage; enough, however, to test the merits of the system. The superior attainments of those who had thus studied through the lengthened college year, under even an imperfect system of graduation, over those who had attended the usual two courses of lectures was so marked when they came up for their final examination for the degree of M. D. that the faculty at once abandoned the old and the optional course of study for the new. In 1875 they adopted in full a three years' graded course of instruction, with written and oral examinations for advancement into the second and third years, with evidence of a good English education before entering the college. Every year's experience brings new evidence to justify the change. The change of plan of instruction has, no doubt, emptied some of our seats.

The colleges are equally greedy to fill their benches and swell their graduating classes for the prestige of numbers and the dollars they

bring, without any very high regard for the acquirements of their students, and it is believed that the examination for the degree of M. D. in many American colleges is often very superficial, almost a farce, and the possession of a diploma is no real guarantee of medical scholarship, — certainly no guarantee of scholarship like an Old World diploma.

In corroboration of these statements we may say that very few candidates for graduation are rejected in this country; I do not know just what per cent., but probably not more than two or three, notwithstanding all the looseness of college instruction common to the country. However, at Harvard, in June last, of the seventy-two candidates six withdrew their names, forty-seven succeeded, and nineteen were rejected. In Great Britain the questions and the number of candidates passed and rejected are published; on these subjects in this country the profession and public are almost entirely ignorant. But in Great Britain, under their graded, more systematic, and longer period of study, it is no uncommon thing for twenty or thirty per cent. of their candidates for medical honors to be rejected and sent back to the colleges for six months' further study, for they are examined by a board outside and quite independent of the colleges.

In May last, sixty-eight students presented themselves before the Royal College of Surgeons, England, to pass a higher grade, thirty-six of whom were rejected; and still later, twenty-eight candidates presented themselves for fellowship, seventeen of whom failed to satisfy the court of examiners. We have no such guards as these in this country to protect the people from an ignorant medical profession.

In 1876 five or six medical faculties issued a call for a convention of medical colleges, to assemble in Philadelphia, on the 2d of June, "to consider all matters relating to reform in medical college work." This was a new departure, and much was hoped and expected from the convention. It was hoped that a new era was about to open up in medical education with the dawn of the second century of the republic, and that the old and inefficient system of instruction that was forced upon the colonies and on the republic in its early days by the exigencies of the time was about to give place to a plan of education commensurate with the advance of science and in accordance with the growth and general advancement of the country.

Syracuse sent two delegates to the convention, but the first morning's session revealed its character to such an extent that one delegate left it in disgust, and the other attended but one more session. They saw no heart or soul in it for anything better or higher in medical education. These early convictions proved but too true. The fruits of that convention are on my table in the way of the history, constitution and by-laws, and work of the American Medical College Association, which holds in its membership twenty-four or more colleges, and they show by

negative evidence a disgraceful rottenness in American medical colleges past belief, had it not been thus semi-officially announced.

They reveal the fact that the colleges have openly solicited, by "wholesale," students to fill their benches almost or entirely without charge. The association resolved "that no medical faculty should issue a diploma not bearing the graduate's name," and that "no degree in medicine should be conferred under any circumstances except after an examination in person of the candidate upon all the branches of medicine." Diplomas signed and ready for sale! Degrees conferred without personal examination, and students gathered in by "wholesale" without fees! Did this convention on these subjects legislate "and resolve" against phantoms or against facts? Is it any wonder that medical education is at a low ebb, and that the profession is overcrowded?

Thanks to the American Medical College Association for the attempt to suppress these abuses. But more was expected of the convention than the enforcement of common honesty in high places. Beyond this, in our judgment, the objective point of the association is mercenary, — simply a college trades-union for the better collection of college fees. "The objects of this association," as set forth in the constitution, "shall be the advancement of medical education in the United States, and the establishment of a common policy among medical colleges in the more important matters of college management." This is the beginning and the end of the advancement of medical education by the association. It tells the same old story of more than one hundred years in regard to two courses of lectures, required time of study, age, moral character of the student, not of the college, etc., etc., with two slight changes only. For some time the lecture term has been twenty weeks in a few colleges; now it is to be twenty weeks in all. Formerly the time of study was three years; now, two years and nine months. Two to four weeks added at one end and three months taken off at the other! We fail to see the "advancement;" however, it must be there or somewhere else, for that is the object of the association.

The association acted with great consideration to get things ready to prevent any shock or disaster to this astounding and unlooked-for advance in medical education; it very kindly, in the enacting clause, postponed the full consummation of the great event for two years. There is still another resolution bearing on medical education, as follows: "This convention recommends to all medical colleges to offer to students the option of three courses of lectures." Three or four courses of lectures have always been at the option of the student. The practice adopted by some of the colleges of graduating two classes the same year is also prohibited by the association.

In this historical document there are no less than eight sections pertaining to medical fees. The students must pay up in cash, and the

colleges are not to be filled hereafter with students by "wholesale" without fees. All these provisions are to take effect immediately. The glory of the American Medical College Association in "the advancement of medical education in the United States" is yet to come. It possesses great power for good, and we trust usefulness and honor lie in its future pathway.

If the twenty-four colleges in the association are really in earnest for reform, and the six or seven colleges, not members, who have already adopted a curriculum of real reform, with two or three more added to the list, we should have a working majority of all the colleges in the country, and now even the moral force of the present minority in adopting so just a course would win over other colleges, from principle; the balance would soon follow, from the disgrace and loss of caste attendant on adhering to the wrong. Still farther, if the profession were united, the American Medical Association, the state and county medical societies, could refuse to recognize the diplomas and the colleges still working on the lower plane.

This American Medical College Association is an imperial congress in medicine for this country. It has strength and power; there is no authority above it in matters pertaining to the standard of medical education. It has already exercised its prerogative over the length of the college year and time of study. Will it now strike the key-note of a higher medical education? Will it elevate the standard, or continue to trail it in the dust?

There is one further step in the way of reform that this college is desirous should be taken, and that is an independent board to examine the students for medical honors.

We are prepared to petition the legislature of the State of New York to appoint a medical board of regents to examine all the candidates from the colleges in the State for the degree of M. D. If New York, Albany, and Buffalo would join in the petition, we might possibly have such a board before the close of the present college year.

But let us inquire as to the probable effect of the general adoption of a three years' graded course of instruction, with a lengthened college year. On the present plan, a college with an average class of two hundred students would receive one hundred new students and graduate one hundred every year. On the new plan, with an average entering class of one hundred, the class would consist of three hundred in place of two hundred. If the lecture fees were fixed at one hundred dollars, the annual income of the college on the old plan would be twenty thousand dollars, on the new thirty thousand dollars; or with a charge of a half fee for the third year, as in this college, it would still be twenty-five thousand dollars.

But there would probably be a falling off in the actual number of

medical students; they might shrink one third on the three years' plan, though it is believed they would not, and still the college class and income be undisturbed. Prospectively, the change would add students to the classes and dollars to the college coffers.

There has always been a small percentage of students dissatisfied with the advantages of the American college system (and it is believed to be largely on the increase), who have continued their studies abroad for one year, two years, or more after graduating in this country before entering into practice. But the student need not go abroad to continue his studies, except as a matter of ornament, for we have at home the requisite knowledge, talent, and ability to teach all that is valuable in medicine if it were properly incorporated into our college system. Notwithstanding what we have said of colleges and graduates, we believe the American mind to be more practical than the European, and with equal knowledge the American is the better man at the bedside.

The outlook, as a result of the change, is for the better in every direction; better for the college, better for the student and patient, not even "partial evil" for "universal good." But how can it be done? Just issue the next annual announcement on the new plan, and work to it, as the Chicago Medical College, Harvard, Syracuse, Michigan, and the University of Pennsylvania have done. The Johns Hopkins Hospital Medical School is to be conducted on the graded plan, and now, while we write, we hear that the University of California and the Medical College of the Pacific have fallen into line. "Where there is a will there is a way."

But it has been contended in several quarters that only through endowed professorships can a higher college culture be attained or maintained. If this is the only basis for reform, reform is afar off, somewhere among the distant ages. What intelligence can have patience with such twaddle? Moonshine! nonsense!

One of the latest utterances on this subject comes from a venerated and honored teacher, Prof. Frank H. Hamilton, who delivered the annual address before the American Academy of Medicine, at Easton, Pa., in September last,¹ and to whom we would offer a tribute of affection and respect, as one from whose eloquent lips, near half a century ago, we received our first lessons in surgical science. He says that in all the efforts of the colleges in the direction of a higher medical education, "not one of them has ventured a step beyond what was deemed safe in a pecuniary point of view. Nor will they." As a whole, the tendency of the address is conservative, apologetic for the evils it so forcibly presents and condemns. It sees no way out of the maze except through endowed professorships. However, the whole evil is made to hinge on the possible loss of the "almighty dollar." But we hope we have al-

¹ New York Hospital Gazette, October 3, 1878.

ready shown that this part of the argument in favor of the old system is a bugbear.

The medical colleges of Great Britain are not endowed, and why must ours be to secure a higher medical education? Teachers there, as here, are paid from college dues, while on the Continent the management of the schools is more or less directly under the control of the governments, and the salaries of the professors are fixed, students or no students, at sums varying from six hundred to two thousand six hundred dollars a year.¹

But your medical department adopted the graded plan without endowment and without much regard to pecuniary results. It saw the better way, and walked therein, and has maintained itself for four years, — not, however, without some self-sacrifice, — and it still proposes to maintain itself.

From this outline sketch of medical education at home and abroad, we can see something of our national position in the world of medicine. It is flattering neither to our pride nor to our intelligence. We hope the advanced position taken by the medical department of this university will meet your approval and commendation; that you may give us both moral support and material aid, at least to such an extent as to clear the college property from indebtedness.

The needed reforms would seem to be some standard of preparatory education, a graded course of instruction extending over a period of three, if not of four or more years. If the reform is to be radical and complete, five years are as much of a necessity now as three were one hundred years ago, with lengthened college year, annual examinations for advancement, and a final examination by a board independent of all teachers and colleges, thus giving a real and a uniform value to all diplomas.

RECENT PROGRESS IN THE THEORY AND PRACTICE OF MEDICINE.

BY A. L. MASON, M. D.

Germ Theories. — Dr. John Drysdale,² in the inquiry as to the intimate nature of the miasm or infectious matter on which diseases depend, reduces the exciting causes to parasitic germs and graft germs, or “partial bions.” The experiments of Tyndall show that all ordinary air contains ultra-microscopic organic matter, and that noxious living matters may be wafted hither and thither in apparently pure air. But as bacteria are easily demonstrated and microphytes are certainly present

¹ These and many other facts of the paper have been obtained from the Introductory Address of Prof. William Pepper, A. M., M. D., of the University of Pennsylvania, delivered October 1, 1877.

² *The Germ Theories of Infectious Diseases.* London, 1878.

in the blood in many contagious diseases, the author says "it has been concluded somewhat hastily that the growth and development of these germs or parasites are the cause of specific diseases in general. . . . The simple statement that a particular disease is coincident with the presence of foreign organisms, or even of a particular parasite, covers many fallacious inferences, for their presence may be secondary or accidental." Passing over the well-known parasitic diseases like scabies, trichinosis, etc., the author comes to anthrax or splenic fever, considered to be characterized by the universal presence of the *bacillus anthracis*, and relapsing fever, provisionally admitted to be caused by the *spirillum Obermeieri*, although Dr. Drysdale states that the same bacterium is found abundantly in the Liverpool water. "It may well be," he says, "that the discovery of micrococci even constantly in particular infectious diseases by no means proves the causation of that disease by specific parasitic germs." From the ubiquity of fungus germs, bacteria, they are found in great numbers in many parts of the body. The specific bacterium cannot be sufficiently isolated for inoculation without introducing some of the diseased secretion containing graft-germs, which might be the true contagium.

As the author cannot adopt the parasitic germ (bacterian) theory, which places the cause of disease solely in something foreign to the diseased body, he adopts the alternative of tracing the exciting cause to morbid secretions thrown off by the diseased body, which may contain particles of living matter (protoplasm), after the hypothesis of Dr. Lionel Beale that the miasms and contagia are actual portions of degraded protoplasm or living matter, graft-germs, partial bions, which being transferred to a new body continue to live and grow, causing the phenomena of contagion and infection. Here the opposing force of vital resistance and constant elimination comes in. The white blood corpuscles, lymph corpuscles, epithelial cells, and especially the spermatozoa, detached living particles of the higher organism, are classed among the partial bions. In opposition to Dr. Beale, who regards the multiplication of these graft-germs alone as the cause of disease, the author considers the partial bions of the specific fevers as specific *stimuli* also, which excite in the healthy parts an altered vital action which constitutes the disease. The interaction of two somewhat different kinds of protoplasm, as seen in the process of reproduction, is supposed to find its analogy in a *quasi-sexual* operation of disease germs, and, although there is no actual proof that partial bions can be reproduced in any way except by fissiparous generation, the author proposes to add the term *conjugation germ* to those already in use, thinking that the admission of a quasi-sexual power in the partial bions or infectious germs would remove the objections to both the parasitic and simple graft-germ theories, which tend to consign these diseases to a department of natural history. "Were it so," he continues, "there would be little hope of their extinction or

mitigation by the medical art. On the other hand, if they are diseases bred within us from altered conditions of health, our prospects are better, though not unreservedly so."

The parasitic origin of diphtheria, which was so strongly maintained a few years ago by Oertel, Eberth, Letzerich, and other German writers, has been controverted by Senator, Chauveau, Beale, and Mackenzie,¹ who have found the *leptothrix buccalis* and its spores in diphtheria, as in other forms of stomatitis, but no specific micrococcus. Dr. Beale states that "vegetable germs are present in every part of the body of man and the higher animals, probably from the earliest age, and in all stages of health. . . . Millions of vegetable germs are always present in the dorsum of the tongue and in the alimentary canal."

Drs. Edward Curtis and Thomas Satterthwaite, of New York, as the result of experiments in the inoculation of diphtheritic membrane upon rabbits, conclude, among other things, that the poisonous quality which can be separated by filtering, and cannot be destroyed by a strong solution of salicylic acid, is due to some particulate thing which is not soluble in cold water, and that it is not correlated to the vital activity of the bacteria present in such membrane. The deduction is that "there is no theoretical ground for assuming that preventing the bacteria of a diphtheritic patch from making their way through the underlying mucous membrane will *per se* prevent general diphtheritic infection of the system."

The reported discovery by Letzerich of the micrococci and spherules of protoplasm in the blood of typhoid fever patients, supposed to be characteristic of that disease, and the production of a somewhat similar disease in rabbits by the injection of portions of the stools containing these micrococci, with enlargement and induration of Peyer's patches (without ulceration, however), are the subject of an article in the *Lancet*.² The conclusions do not appear to be entirely warranted.

Sir Joseph Fayrer read an interesting paper on the Relations of the *Filaria Sanguinis Hominis* to Endemic Disease in India before the Epidemiological Society of London,³ in which attention was called to the advance in recent years in the knowledge of the relation of this parasite to certain forms of tropical disease in which the filaria is found in the blood, especially chyluria and other disorders of the lymphatic system, elephantiasis Arabum, hæmaturia, hydrocele in certain forms, etc. The wall of the aorta seems to be a favorite place for development, the parasite being found coiled up within a small tumor. When in embryo the length is about $\frac{1}{16}$ of an inch, the breadth from $\frac{1}{600}$ to $\frac{1}{700}$; the worm at a later stage attains a length of three fourths, and a breadth of one fortieth of an inch. Many forms of disease appear to be associated

¹ Diphtheria: Its Nature and Treatment. By Morell Mackenzie, M. D. London. Philadelphia: Lindsay and Blakiston. 1879.

² The Lancet, January 25, 1879.

³ The Lancet, February 8, 15, 22, 1879.

with the presence of this parasite. The area of distribution of these diseases is said to correspond with the geographical distribution of the musquito, which is thought to be a propagator of the parasite through the agency of drinking-water. The rare occurrence of these affections in temperate climates, where musquitoes are numerous, is not considered.

Diphtheria and Croup. — At a meeting of the Royal Medico-Chirurgical Society, held October 22d,¹ the report of the scientific commission to investigate the relation existing between the diseases "known as membranous croup and diphtheria," after enumerating the causes of membranous inflammation of the larynx and trachea, and throwing doubt on simple exposure to cold as a true cause, recommends that "croup" be used solely as a clinical definition implying laryngeal obstruction occurring with febrile symptoms in children, and that the term "membranous laryngitis" should be employed when possible, for the avoidance of confusion. This report, although not positively affirming that all cases of croup are of diphtheritic origin, conveys the impression that the facts within the knowledge of the commission do not justify the supposition that the two diseases are distinct.

Milk Epidemics of Typhoid Fever and Diphtheria. — Epidemics of typhoid fever, supposed to have been generated by infected milk, have been so alarmingly frequent of late years in Great Britain that the registration and inspection of dairies have been deemed advisable by Parliament. Extensive epidemics traced to this cause have occurred at Bristol, Manchester, Glasgow, and Ascot. At Glasgow one hundred and sixty-three cases were observed. The epidemic at Ascot, which was most carefully investigated by Dr. Ballard,² differed in some respects from the others. No similar epidemic of typhoid fever had prevailed at Ascot within the memory of the oldest practitioner there, a period of more than forty years. While previous milk epidemics had lasted but a few months, this one extended over a period of four and a half years. The persons attacked were, with few exceptions, using the milk from the same farm, and, although months sometimes elapsed between the consecutive cases, the source was thought to be always the same, and this intermittency of the invasions of the fever was thought to indicate an intermittent cause for the milk infection. It was found at the farm that the milk might readily have been contaminated by excremental filth, but as the possibility of origin from "filth" *de novo* was not recognized, the source of the specific contagium was sought in the water supply, with negative results only, although Dr. Ballard offers an ingenious theory based upon the geological formation and the possibility of infection from a distance through the subsoil water, which would also account for the intermittency of the outbreaks. The facts,

¹ The Lancet, October 26th; The Doctor, November 1, 1878.

² The Sanitary Record, January 17, 1879.

however, show that of sixty-eight cases in thirty-nine families no less than fifty-eight cases in thirty-one families occurred among persons using this particular milk. Thirty-six were children or young persons. In twenty-one families there were more cases than one, — from two to four — in most instances concurrently or in near sequence. The possible infection through the cows was not considered.

At the annual meeting of the Pathological Society of London,¹ Mr. W. H. Power presented his report of an official investigation of a recent fatal epidemic of diphtheria in North London. There were two hundred and sixty-four cases and thirty-eight deaths. It was concluded that bad drainage was not the cause, nor milk contaminated with sewage, but the milk *per se*. Most of the persons affected were supplied with milk from a particular farm. No external conditions could be found to account for this, but some state of “the cow as cow, and of the milk as milk,” was regarded as the source of the poison. The milk from this dairy was distributed among four hundred and seventy-three households, of which sixty-eight were invaded by diphtheria, whereas but thirty cases occurred in the 2227 other households of the same district, which were supplied by other dairies, a disproportion of more than ten to one. No person at the dairy was known to have had the disease. Garget, an affection of the udder, was suggested as a possible cause of the infected milk supply. In favor of this hypothesis, the other diseases which are known to be communicable from animals to man, in more or less changed aspects, were cited: vaccinia, rabies, trichiniasis, splenic fever; the foot and mouth disease, causing aphthæ and disturbance of the stomach and bowels; finally, scarlet fever and typhoid fever from infected milk. As a coincidence, it was noticed that during a recent outbreak of diphtheria at the Princess Mary’s Home, garget prevailed at the farm which supplied the milk.² If it be granted — and the investigations appear to be somewhat conclusive — that milk was the cause of this and of other epidemics of diphtheria, it is quite within the bounds of probability that some affection of moderate or slight severity in the cow may give rise to diphtheria in man.

The Hesse-Darmstadt Epidemic. — The outbreak of diphtheria in the grand ducal family of Hesse-Darmstadt³ led to the most careful investigations and reports on the part of Professor Oertel, of Munich, and Dr. Eigenbrodt, who were in attendance. In the first place, the palace, which was comparatively new, was found, by the most thorough scientific exploration, to be in excellent sanitary condition, — a statement which is rendered more probable by the circumstance that, outside of

¹ The Lancet, January 11, 1879.

² Medical Times and Gazette, January 18th; Lancet, January 18th; Medical Press and Circular, January 15th; Dublin Journal, February, 1879.

³ The Lancet, December 21, 1878; The Medical Times and Gazette, December 21, 1878; The British Medical Journal, December 21, 1878, January 4, 11, 18, 25, February 8, 1879.

the grand ducal family, no one of the sixty-eight members of the household was infected. Although the first case was isolated as soon as its nature was recognized, during the eight days following five others occurred in rapid succession, with one fatal result. The family, through repeated attacks of acute and chronic tonsillitis, were thought to have been peculiarly susceptible to this disease, and its transmission by kissing seems to be undoubted. The first case, in the absence of any positive evidence as to its source, was supposed to have been contracted outside the palace, perhaps from some slight or unrecognized case in the town. It is also noticeable that the grand duchess, after caring for her whole family with the most admirable devotion, was attacked, during their convalescence, twenty-three days after the last previous infection, at a time when continued anxiety and exposure, instead of exhausting the susceptibility to an attack, appear to have rendered it more fatal.

Attention is called to the increasing list of deaths in the medical profession in France and Germany during the past few years from diphtheria contracted under similar circumstances by *direct contagion*, — Valleix, Blache, O. Weber, Brücke, Hoffmann, Heine, and others, all of whom had undergone much previous exposure.

With regard to treatment, advantage was taken by Drs. Oertel and Eigenbrodt of all the resources of modern therapeutics: solutions of chlorate of potash, salicylic acid and permanganate of potash, chlorine water, inhalations of lime water, disinfectant spray and steam; internally, salicylic acid, quinine, benzoate of soda, sulphur, and morphine, with *plenty of nourishment and stimulants pro re natâ*, — a symptomatic treatment, directed both to the local and general conditions, without reliance upon any specific remedy as such.

The above-mentioned epidemic, in which the cases were all of severe type, is the subject of an article in the *Lancet*,¹ in which the following facts are emphasized: that diphtheria, although sometimes highly contagious and epidemic, again appears to be strictly localized, clinging to certain houses, or even rooms, with little tendency to spread; also, that it originates “by unknown conditions in regions where the operation of contagion can be almost entirely excluded.” Although bad sanitary conditions have often been observed to attend outbreaks of diphtheria, such is not always the case, and the local defects can be considered as aggravating or predisposing causes only.

Diseased Meat as a Cause of Typhoid Fever. — Professor Huguenin and Dr. Walder² record the history of an extensive epidemic of typhoid fever which was thought to have been caused by eating diseased veal.

¹ November 23, 1878.

² Correspondenz-Blatt für Schweizer Aerzte, August 1, 1878; Berliner Klinische Wochenschrift, No. 39, 1878; Medical Times and Gazette, February 8, 1879.

At a festival of the singing societies of the district, held at Kloten, Canton Zurich, Switzerland, about eight hundred pounds of veal and sausages were consumed. The veal turned out to be infectious, and from the second to the ninth day after the festival many inhabitants of the neighboring villages, about five hundred in all, were taken with nausea, headache, fever, abdominal pain, and meteorism. Those persons who ate pork did not suffer, nor did those who drank wine or water without partaking of the veal. On the other hand, many of the fever patients declared that they had not touched water the entire day. The disease appears to have been typhoid fever (*typhus abdominalis*), which ran a nearly typical course in most instances, with rather a severe onset, much delirium, and great tumefaction of the spleen. In four fatal cases the autopsies showed all the characteristic lesions of typhoid fever. In four instances there were relapses, and twenty-seven cases of secondary infection were observed in attendants. Professor Huguenin adds that several instances of genuine typhoid fever have occurred in calves in the barns of some of the patients. At least one calf which was used at the festival was known to have been sick before it was slaughtered. There had been no epidemic of typhoid fever in that neighborhood for many years. Detailed accounts will be published in a short time.

(*To be concluded.*)

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

T. M. ROTCH, M. D., SECRETARY.

DECEMBER 28, 1878. *Medical Library.* — In accordance with the advice of the committee on change of rooms, the society authorized the president and treasurer to make such arrangements as should secure the use of the hall belonging to the Medical Library, on Boylston Place, for the Suffolk District Society, at the rate of three hundred dollars per annum.

Metallo-Therapeutics. — DR. J. J. PUTNAM read a paper on the supposed cure of cutaneous anæsthesia by the application of metals to the skin, which was published in the *JOURNAL* of March 13th.

Disease of the Spinal Cord. — DR. F. MINOT reported the following cases of disease of the spinal cord, saying that they were not offered to the attention of the society on account of their novelty, but in the hope that any contribution to the study of this interesting class of cases might be of value. They comprise one case each of bulbar paralysis, disseminated sclerosis, wasting palsy, locomotor ataxia, and lateral sclerosis, which were all in his service at the Massachusetts General Hospital at the same time in the spring and summer of 1878.

CASE I. *Bulbar Paralysis.* — M. B., sixteen years old, entered the hospital April 18th, as a surgical patient, on account of difficulty in swallowing. The nature of her complaint being recognized, she was transferred to the medical

side. She was single; American born; family history said to be good. She enjoyed good health till February, 1877, when she caught cold, as she said, and coughed more or less, raising frothy, whitish, and sometimes yellowish sputa, but no blood. She was never confined to the house. About the same time she began to notice a difficulty in speaking, which became worse during the following summer, but improved somewhat afterwards, as she thought. About two months later she began to have difficulty in swallowing, and this symptom, also, varied at times. At the same time ptosis of the left eyelid occurred, which remained permanently. During the summer of 1877 the catamenia ceased for three months, and they were also absent for four months preceding the patient's entrance into the hospital; otherwise she had been regular. There had been no impairment of motion or of sensation in the limbs, except that there had been some loss of strength in the right leg for a week before her entrance. The appearance of the patient was striking from the immobility of the features and the ptosis of the left eyelid. Her expression was that of sadness, and as if she were about to cry. The speech was slow and imperfect, and the voice extremely nasal. There was much difficulty in swallowing, liquids being rejected through the nose, but she could get down soft solids, such as oatmeal porridge, rice, etc., pretty well. The tongue was protruded straight, and to the full extent. There was some flow of saliva from the mouth, diplopia, vertigo, and flushing of the face. She complained of pain in different parts of the head, and particularly beneath the lower jaw, on the right side. These pains, she said, were increased in damp, cold weather. She walked slowly and with difficulty, but was able to get down-stairs. The muscular power of the arms and hands was deficient. She had lost much flesh. — Dr. J. J. PUTNAM, who kindly examined the patient, found the faradic reaction of both facial nerves much diminished, the limits of muscular contraction being soon reached with currents of moderate strength. Faradic reaction of the palate and pharynx was greatly diminished, as was also the sensibility of the palate. All the muscles of the palate and pharynx reacted better to galvanism than to faradization, but there were no signs of the "reaction of degeneration." There were involuntary contractions of the facial muscles, both associated and reflex, giving the expression of laughing and crying to a marked degree. Galvanic irritation of the larynx excited feeble movements of swallowing. Examination of the larynx by Dr. Knight showed the vocal cords to contract and open perfectly, though feebly. The patient gradually failed, and died June 19th. The chief complaint she made was of headache, which was nearly constant. About the 1st of June she became unable to expectorate, and began to have increased difficulty in swallowing, so that in a few days she was unable to take any food by the mouth. On the 18th she fell on the stairs, apparently receiving no injury, but the headache increased in severity; it was relieved by chloral hydrate and bromide of potassium given in enema. During the night there was difficulty of breathing and cyanosis of the face. She died apparently from apnoea, the respiration ceasing some little time before the heart stopped breathing. The friends refused permission to make a post-mortem examination. Among other interesting points in this case are the age and sex of the patient, the disease being rare under

the age of forty, and also in the female sex. It is remarkable that the power of protruding the tongue was retained, and it is noteworthy that, as in this instance, "catching cold" is frequently assigned as the cause.

CASE II. *Disseminated Sclerosis.* — E. C., thirty-one years old, seaman, entered hospital April 23, 1878. Health always good till September, 1877, when he was struck by a whale, thrown into the air, and fell upon the gunwale of a boat, striking the left side of his body, a little above the crest of the ilium, and the left side of the forehead. His urine was bloody for a few days after the accident, and in three weeks he noticed "twitching" of the eyeballs, which has continued ever since. There has been some pain in the back of the neck together with a grating sound; on turning the head, some involuntary twitching of the arms and legs, especially those of the left side, and constant shaking of the head ever since the accident. He had been losing strength and flesh rapidly for a month before his entrance. There was almost constant lateral oscillation of the eyeballs, with tremor of the head and occasionally of the limbs. The hearing and smelling were imperfect on the right side as compared with the left. The patient was apt to stumble in walking. He complained of pain in the forehead and behind the left ear. The eyesight was impaired, especially for near objects. The urine contained a trace of albumen and a few hyaline casts. He remained in hospital till May 16th, and went out slightly improved in his general condition. The disease was evidently in an early stage, many symptoms frequently met with being wanting, as, for instance, the affection of the speech.

CASE III. *Wasting Palsy with Lateral Sclerosis.* — T. S., twenty-eight years old, single, stone-cutter, entered hospital May 23, 1878. Health good till two years previously, when he began to have pain in the right knee and weakness in the limb. About the same time he found he could not straighten the fingers of the left hand, the two distal phalanges of which were flexed. The muscles of the hand began to waste. One year later the left knee and leg were affected similarly to the right, but to a less degree. Walking became difficult. He had occasional attacks of pain along the course of the left facial nerve. He gave up work nine months before his entrance. The left hand is a good example of the claw-like hand of muscular atrophy. The ball of the thumb is much flattened. There is some wasting of the dorsal interossei muscles, especially between the thumb and forefinger. Circumference of left arm, just below elbow, half an inch less than right. Lower part of sternum and adjacent cartilages project strongly forward and to the right. There is a marked spinal curvature, with concavity backward and to the right. He walked slowly and with difficulty, as if the feet were made of lead, the toes dragging on the ground as he advanced. The tendon reflex was exaggerated in the legs. The internal treatment consisted in the administration of one sixtieth of a grain of phosphorus in pill, three times daily, which was continued from May 24th till August 16th, when it was omitted, and the iodide of potassium, in ten-grain doses, substituted for it. Electricity was employed daily under the direction of Dr. J. J. Putnam, who also applied the actual cautery to the back by means of Paquelin's instrument about twice a week. The patient constantly declared that he was improving. November 1st it was reported that he could

walk much better, but that the left hand and arm were about the same as at entrance. After this date he became an out-patient, and is at present employed in light work about the hospital, still continuing the treatment, which seems to have benefited the sclerosis to a marked degree, as he can now walk quite well, although he still drags the toes somewhat. There is some improvement in the hand, but he is unable to bring the thumb and little finger in contact. The "tendon reflex" continues in an exaggerated degree.

CASE IV. *Locomotor Ataxia*.—W. U., thirty-six old, single, fisherman, entered hospital May 27, 1878. He had been much exposed to wet and cold, in the prosecution of his business. He also had syphilis five years previously, and gonorrhœa several times; moreover, he had drunk liquor freely. His present disease began four years ago, with obstinate vomiting, which still continued, though at less frequent intervals. Along with the vomiting he had a feeling of constriction around the waist which was especially severe in the forenoon. Soon after this he noticed a feeling of numbness in both legs, especially below the knees, and much difficulty in walking from loss of control over the limbs. The hands and arms trembled when he attempted to use them. He had attacks of vertigo. These symptoms had been steadily increasing up to the time of his entrance. The movements of the limbs in walking were very characteristic of locomotor ataxia. He was unable to stand with the eyes shut, and had plantar anæsthesia. He complained of darting pains in his trunk and limbs, extending down to the toes. The reflex movements of the limbs were greatly diminished; there was much nausea. The urine contained a trace of albumen. On account of the syphilitic antecedents, he was treated with the biniodide of mercury and iodide of potassium, which were continued at intervals during his stay in the hospital. There was some relief from the pain, but no essential improvement at the time of his discharge, July 27th.

CASE V. *Lateral Spinal Sclerosis*.—A. C., twenty-five years old, domestic, single, entered the hospital June 24, 1878. She had passed some time during the winter in the Boston City Hospital. Her parents were living and well. Her own health had always been good before the present disease, for which she knew no cause. She had never received any bodily injury. Eighteen months ago she first noticed some difficulty in flexing the right foot, with numbness in the part and a tendency to stub the toes of that foot in walking. The symptoms increased, and were succeeded by tremor of the foot and leg up to the knee, provoked by any excitation, and at times coming on without any apparent cause. She had some pain in the calves of the legs on walking. The catamenia were regular; bowels rather constipated; no affection of the sphincters; appetite poor. The following report of her condition is by Dr. J. J. Putnam: "The patient walks as if heavy weights were attached to both feet, compelling her to use all the muscles of the trunk in moving them forward. The feet are inclined to 'toe inward.' All motions of the feet and legs are possible, though all are feeble, especially dorsal flexion of the feet and flexion of the right leg. There appears, however, to be but little atrophy of the muscles, and the feebleness in performing a given movement is evidently due in part to faulty innervation: thus, in attempting to perform dorsal flexion of the foot she involuntarily blocks the movement by contracting the muscles

of the calf as well as the anterior tibial. The electro reaction (faradic) of almost all the muscles seems slightly diminished. There is very great exaggeration of all the 'tendon reflexes' of the lower extremity." Ophthalmic examination by Dr. Wadsworth showed vision of the left eye almost absent, and that of the right impaired. There is separation of the retina in the right eye, and connective tissue opacities in the vitreous of the left. A galvanic current of moderate strength was applied along the spine for ten minutes daily; iodide of potassium, followed by iron and quinine, was given internally. There was no essential change in her condition when she was discharged, August 27th.

Color-Blindness. — DR. B. JOY JEFFRIES spoke on color-blindness in continuation of his remarks at the meeting May 25, 1878. He was engaged in testing for color-blindness in the public schools of Boston, with the result of finding the defect as frequent as has recently been found in Europe. He again showed and explained Professor Holmgren's method with a large number of small knots of variously colored worsteds; this test depends wholly on comparison, no names of color being used by the examiners or those examined, and they need not even know each other's language. Until we had this test in the practical form in which Professor Holmgren has put it, the gathering of such statistics as are now being made was impossible. One hundred persons can, by this test, be readily examined in an hour, while with most other methods that time would be needed to test a single individual in order to arrive at a similar degree of accuracy. Dr. Jeffries also spoke of the necessity of teaching the names of colors in the primary and grammar schools, forcibly illustrating it by what he had found, and showing that any test requiring the examined to use the names of colors would result in proving that about three fourths of all the boys were color-blind, as was the unfortunate result when Dr. Favre, in France, made use of a similar false method of trial. He also described the palliation of color-blindness by artificial light, by means of yellow glass resembling it and by a solution of fuchsin (an aniline red) hit upon by Professor Delbœuf, of the University of Lille, Belgium. From Delbœuf's reports much had been expected from this latter method, but a test of five color-blind persons had not seemed to place it much above artificial light or yellow glass in its assistance to prevent the color-blind's mistakes. He closed by speaking of the almost universal action of the government railroads and private companies of Europe in the control of color-blindness among the employees, illustrating the necessity of this by the reports of the various examiners as to the percentage of color-blindness among those daily employed in duties where a perfect color perception was necessary for the safety of the lives and property of the passengers. Whilst bystanders had wondered at Dr. Jeffries' perseverance in what seemed so monotonous a task, he had, as he knew others would, found that this sort of examination had great psychological interest aside from the value of the information in reference to color-blindness itself and its prevalence among males.

JANUARY 25, 1879. *Dr. Jacob Bigelow.* — DR. G. H. LYMAN spoke as follows concerning Dr. Jacob Bigelow: Mr. President, — When one of our number, however obscure, who has been in his way an honorable and honest

worker is taken from us, we are all glad to give some words of eulogy, which often under the impulsive emotions of the occasion may be thought extravagant and misplaced; a kindly error, it must be confessed, but still an error, for when a really great man dies we have no language remaining to distinguish him from others. This is peculiarly applicable to the present occasion, when it becomes our duty to allude to the death of Dr. Jacob Bigelow, our oldest, and, without disparagement to others, it may be said our most distinguished member. For the honor of the society we wish to make some record of one who has filled a first place among his brethren so long and so well. The older members are all familiar with his wisdom and gravity in legislation, his wit and learning on every social occasion, his sound judgment in consultation, his moderation and serenity at all times. His great personal influence was always used for the honor, dignity, and progress of his profession. To him in an eminent degree belongs the credit of breaking up the polypharmacy of the past by contrasting the powers of nature with the powers of drugs. Had his influence accomplished nothing more than this, it would have sufficed to add lustre to his name and fame for generations to come. But, Mr. President, his professional distinction needs no eulogy in this presence, and it is only at your special request that I venture to offer the following resolutions to be entered as customary and proper upon the records of our society:—

Resolved, That the Suffolk District Medical Society recognizes in the death of Dr. Jacob Bigelow the loss of one of its oldest, wisest, and most influential members, whose long and brilliant professional life was from beginning to end one of patient industry, unsullied integrity, and unvarying regard for the honor and dignity of his calling; that his unrivaled learning and wisdom and his power of accurate observation have served greatly to strengthen the foundation of medical science and practice; and that as a society we urge his example upon all who may succeed him as one worthy of close imitation. *Resolved*, That the foregoing be entered upon the records of the society.—Dr. H. W. WILLIAMS did not wish the occasion to pass by without speaking of Dr. Bigelow, for he had known him for many years, and his career, though perhaps but little familiar to the younger members of the profession, had been a very brilliant one. He had done an infinite amount of good to the profession by showing that disease is self-limited, and he was greatly distinguished as an investigator in and an authority on medical botany. His mind remained clear to the last, and he calmly resigned himself to the infirmities which his great age brought upon him.—Dr. BOWDITCH heartily coincided with the remarks of Dr. Williams and Dr. Lyman, and spoke of a conversation which he had with Dr. Bigelow in his ninetieth year, saying that it was one of the most remarkable that he had ever had with any one.

Dr. J. B. S. Jackson.—Dr. F. MINOR read the following regarding the death of Dr. J. B. S. Jackson: In noticing officially the decease of our late Fellow, Dr. J. B. S. Jackson, we would express our high appreciation of his character and of his professional ability. His name has been identified with the subject of Morbid Anatomy for more than thirty years, during which time he was indefatigable in the study of his favorite pursuit, and eminently successful in teaching it. His contributions to the science of pathology have done much

for the advancement of medicine, while his zeal in the search after truth, his simplicity, modesty, and conscientiousness have made his life worthy of admiration and of imitation.

Pulmonary Thrombosis. — DR. E. CHENERY read a case of thrombosis, which is reserved for publication.

Tuberculosis simulating Typhoid Fever. — DR. F. MINOT read a case of supposed tuberculosis simulating typhoid fever, which will be published in full.

Osteoclasty. — DR. ARTHUR CABOT read a paper on osteoclasty, and exhibited two children operated on by him with most excellent results.

Disinfectants. — DR. H. I. BOWDITCH made some remarks on Wheeler's disinfecter for water-closets, highly recommending it for general use from the experience which he had had of it in his own house.

ROGERS ON THE GREAT PHYSICAL FORCES.¹

DR. ROGERS thinks that the current theories regarding the production and dissemination of sunlight and sun-heat are altogether too severe a tax upon his credulity and common sense. Accordingly he has written a book in which he exposes the unsatisfactory features of the combustion and nebular hypotheses, and at the same time propounds a great number of conundrums in the form of exclamatory interrogations, which bristle with large adjectives of the superlative degree.

Having proven that the sun is a failure as a stove, he converts it into a huge electrical magnet, which, acting in unison with the earth as another element, generates a "grand magnetic circuit." The sun is likened to an electro-magnetic battery, which, though a "developer of light, heat, and power," is itself "neither luminous, hot, nor magnetic." On this theory it is not necessary to suppose that the sun is luminous or even warm, but it is cool and habitable, and emits no light.

The "grand magnetic circuit" is the source of light and heat, and this "stupendous magnetic circuit" occupies a cone-shaped space between the sun and earth. The aurora borealis is the return current.

The "enormous magnetic circuit" is the key-note to Dr. Rogers's theory, and to the correlation of all physical forces. No problem of nature can present itself which this "gigantic circuit" cannot render instantly luminous, and as the author exposes to us all the possibilities of this "immense magnetic circuit," we are reminded of the judge's enthusiastic faith in the possibilities of "this glorious climate, Californy."

But Dr. Rogers's theory has a moral aspect worthy of consideration. He assures us that, "beyond the boundaries of the solar cone, *no light is*," and therefore "the boast of the atheist that God is wasteful and a bungler, in that he wastefully scatters his sunlight and sun-heat in all directions into space, is set at naught."

Among other things, the author informs us that "light is ascertained to be

¹ *New and Original Theories of the Great Physical Forces.* By HENRY RAYMOND ROGERS, M. D. Published by the author.

as veritable a substance as water." It passes through space instantaneously. "All space may naturally be regarded as a complete vacuum, thus presenting no resistance or obstacles to the free progress of the retroacting elements." Distance is then virtually annihilated. "The fields, forests, rocks, and seas only absorb light; they do not reflect it."

In reading the above quotations it may be well to remember that Dr. Rogers modestly repudiates all claim to infallibility, and craves indulgence for crudities.

SANITARY CONDITION OF BOSTON.

IN looking through the Board of Health records for 1878 we find matter of especial interest in the statistics of *scarlet fever*, *diphtheria*, and *typhoid fever*. During the entire year 848 cases of scarlet fever were reported. Of these the largest number occurred in January (158) and in December (120), the smallest number in July (24), after which month there was a steady increase. Computing by wards we find the largest number of cases thus distributed: Ward One, 60; Ward Two, 79; Ward Fourteen, 60; Ward Twenty-Four, 76. The smallest number occurred as follows: 12 cases in Ward Seven; 15 in Ward Ten; 13 in Ward Twenty-Two. The number of deaths from scarlet fever was 68. The largest number occurred in December, none in September.

Of *diphtheria* 1370 cases were reported. Computing by months, the largest number occurred in January (241) and February (188); the smallest in August, namely, 45. By wards the smallest number was reported in Ward Ten, namely, 16 cases; the largest number in Ward Eight, namely 129. In East Boston there were 231 cases equally divided between Wards One and Two. The number of deaths from diphtheria was 450: 53 in January, 52 in December, 47 in June, 43 in March, 38 in February, etc., so that apparently the disease is but little influenced by the season. The smallest number of deaths in one month (22) occurred in September.

The non-fatal cases of *typhoid fever* are not reported. The number of deaths from this disease for the year 1878 was 120, the largest number occurring in January, namely, 15. The deaths then fell to four in February. In August and September there were 13 deaths in each month, and seven deaths each in the months of November and December.

These statistics suggest the following considerations: The imperfect condition of our drainage system naturally would lead us to expect a predominance of cases of typhoid fever, but the statistics as given show only 120 deaths by typhoid fever during the past year, while the death-roll of diphtheria amounts to 450 cases, or nearly two and one half times as many deaths as were caused by scarlet fever and typhoid fever together. This gives rise to the question as to whether sewer-gas poison be not more fruitful of diphtheria than of typhoid fever. It will also be noticed that the death-rate in diphtheria — 30.4 per cent. — is perhaps low, when, in addition to the virulent nature of the disease, we consider that many of the patients lived in unfavorable districts, amid squalid surroundings, and probably received imperfect attention. This being granted, we again would call attention to the total of cases of

diphtheria, 1370. This is a large number for a city of 300,000 inhabitants, the disease not being unusually prevalent. These considerations lead us to an emphatic doubt, namely, as to whether the 1370 reported cases were all diphtheritic. It is well known that the average homœopath calls every patch of cheesy exudation from enlarged follicles diphtheritic, and some members of this school have more cases of diphtheria in one season than, barring epidemics, men of other medical practice see in a life-time. Again, practitioners of every school who are unfamiliar with follicular disturbances in the throat are led into a diagnosis of diphtheria where there is not a characteristic sign of the disease in the case. We consequently think there is no reason for alarm because of the predominance of diphtheria over other affections.

MEDICAL NOTES.

—The profession not of Cincinnati alone, but of the whole country, has experienced a loss to be deeply deplored through the death of Dr. Landon Rives Longworth. He was struck down by pneumonia in his prime, at the age of thirty-three, having done enough to make his friends sure that if he had been spared he would have been a very distinguished man. He graduated at Harvard in 1867, and went abroad to study art. He was gifted both with taste and ability in the very different, if not opposed, fields of music and painting. He required, however, a more active life, and in 1870 he began the study of medicine. He graduated at the College of Physicians and Surgeons in 1873, and took the faculty prize for his essay on The Ligature of the External Carotid. He then passed a year or more in Europe, spending most of his time, we believe, at Vienna and Strasburg. In the latter city he studied with Waldeyer, and published in the *Archiv für Mikroskopische Anatomie* a paper on the terminal coils of nerves found in the conjunctiva. This paper was of decided merit, and entitled its author to be reckoned among histologists. Within a few years he was appointed professor of descriptive anatomy and clinical surgery at the Medical College of Ohio. Beside his taste for art he was an adept in physical science, and devoted much time to experiments in electricity, and to anatomical injections. For some of these facts we are indebted to a sketch of Dr. Longworth's life by his friend Dr. Forelheimer, but the writer of these lines can give his own testimony to the richness of the intellect and the excellence of character of the colleague we have lost.

—After nearly ten years of most devoted service at the McLean Asylum, about seven of which will have been spent in the responsible office of medical superintendent, Dr. Jelly retires, next June, from a position which he has held so honorably, and with a devotion to duty and unselfishness which will long be most gratefully remembered by the many persons whose privilege it has been to know him as physician and friend. He intends to devote some time to well-earned rest and study in Europe, and then engage in practice in Boston, where his friends will be glad to hear that he means to give a considerable part of his attention to the specialty of mental diseases.

—Dr. Forestier, of Lyons, reports two cases of poisoning in infants fed

from the bottle, both of which he considers due to the use of white vulcanized rubber nipples. The symptoms were similar to those of poisoning by sulphide of carbon, and this substance is used in vulcanizing rubber. Since warnings of this nature have been frequent, it seems singular that physicians will allow mothers to make use of any other nipple in artificial nursing than that made from pure rubber.

— Physicians who wish to obtain that rare article, a good bandage, will do well to refer to an advertisement in the present number. The very best quality of cloth and every desirable width and length are to be obtained. Coming as they do in assorted lots in boxes, they are exceedingly convenient for office use. The luxury of a well made bandage is hardly appreciated by those who have not had access to a supply of the best quality.

— Professor Chauffard of the Paris faculty is dead.— In Paris a prize of £400 is open to biennial competition. It is to be given to the author of the best paper on pulmonary consumption or typhoid fever, these subjects alternating in successive competitions. The prize is known as the Prix Lacoze; any country may compete.— A new archive of clinical medicine will soon appear in Berlin under the editorship of Frerichs and Leyden.

— As whooping-cough is epidemic in this city at present, we give the following quotation from a German exchange made by the *Chicago Journal*: Although turpentine inhalation is an old method of treatment, Dr. Gerth cured a case of laryngeal catarrh by placing twenty drops of turpentine on a handkerchief, held before the face, and causing about forty deep inspirations to be taken. Repeating this thrice daily, the cure was quite rapid. In the same family he found an infant fifteen months old in the convulsive stage of whooping-cough, exhausted, and vomiting all ingesta. There was at the same time bronchial catarrh with slight evening rise of temperature. Gerth decided to experiment here also with turpentine. He directed the mother to hold the moistened cloth, as above, before it when awake, and to drop the oil upon its pillow when asleep. The result was most happy. Within the twenty-four hours the frequency and severity of the attacks notably diminished. The child's strength was sustained by stimulants, and improvement was very rapid. Within a year pertussis became epidemic in this vicinity, and he repeatedly tested the drug in this way. He gave it to children of all ages, and in any stage of fever. The initial catarrh, the convulsive and the final catarrhal stages, were all decidedly benefited, the spasmodic attacks being in many cases aborted.

NEW YORK.

— The first practical result of the recent tenement-house agitation has been the combination of a number of gentlemen of means to erect a model building, two hundred feet square, after the general plan of the Peabody flats in London. It is proposed to have a court in the centre, containing a fountain and growing plants, and with an entrance from each of the three streets on which the building fronts; while each room of every suite of apartments will receive an abundant supply of light and fresh air.

— The diagnosis of trichinosis in the supposed case of the disease reported from Brooklyn a short time since has now been confirmed by the death and

post-mortem examination of another of the individuals who partook of the same ham. The autopsy was made in the presence of a number of prominent physicians, and it was found that death resulted from embolism of the pulmonary arteries, due to trichinosis. Trichinæ, in the first, second, and fully developed stages, were also found abundantly in the laryngeal and intercostal muscles and in the diaphragm. Specimens of affected muscle were afterwards exhibited at the office of the sanitary superintendent, Dr. Raymoud, and under a low power of the microscope the trichinæ could be readily seen lying scattered about in incomplete coils. In a bit of muscle about the size of a pea, twenty-three could be counted without difficulty.

—The death is announced of the "Mormon Giant Girl," who formerly traveled with Barnum, and has of late been on exhibition at a Bowery museum. Although only eighteen years of age, she weighed 516 pounds, and her coffin was six feet six inches in length, and two feet in width. An unusual number of extraordinary specimens of the human race have recently been on exhibition in New York, including the "North Carolina Twins" or "Double-Headed Nightingale," the "St. Benoit Twins," which were described last summer in the Boston Medical and Surgical Journal, and the remarkable dwarfs known as the Midgets. A number of well-known physicians were invited a short time since to make a physical examination of the latter. They are about twenty-two inches in height, and the weight of the boy, who is said to be fourteen years of age, is nine pounds; while the girl, who is fifteen, with the long train and all the other appurtenances of a lady of fashion, or rather of a modern French doll, actually weighs only four pounds and three quarters. The diameters of the boy's head, as ascertained by Dr. H. T. Hanks, professor of obstetrics in the Dartmouth Medical School, are scarcely larger than those of the average new-born infant, and those of the girl are even smaller. One was born in Central New York and the other in Mexico. The boy was found to be suffering from a little bronchitis, and after some of the physicians had made an examination of his chest it was very amusing to watch his little companion practicing percussion and auscultation upon him in imitation of their proceedings. The girl is beginning to show signs of the approach of puberty, but has not menstruated as yet. Her parents state that when she was born she weighed only three quarters of a pound, and was but nine inches in height.

—Mr. Henry Bergh, the president of the American Society for the Prevention of Cruelty to Animals, carries his humane principles so far that he is willing to test the virtues of various compounds that are sent him for the relief of the sufferings of the brute creation upon his own person. In a letter which he recently addressed to the proprietors of a certain quack lotion, he says: "I have not yet had occasion to apply it to animals, but I have done so to myself, and have received immediate relief. Being an animal myself, I have every reason to believe that brute creatures would experience similar benefit from its use; and this society will so employ it whenever the necessity shall present itself."

—The body of a young man who was recently found in a comatose condition from the effects of opium, on a Hudson River Railroad train upon its arrival in the city, and who died shortly after his removal to Bellevue Hos-

pital, has been identified as that of one of the students during the late winter course at the medical department of the New York University. At the examination for degrees at the close of the session he failed to pass successfully, and it is believed that it was in consequence of his disappointment and mortification on account of this that he committed suicide. It seems that he had made up his mind to return to the college and pursue his studies during the spring course, with the idea of coming up again for examination in June; but while on his way to the city his courage must have failed him, and he took laudanum. On his person was found a paper on which he had written the words, "I am discouraged."

— Among the numerous recent commencements was that of the "United States Medical College," an irregular institution which was only incorporated May 28, 1878, and in which the first course of lectures was begun only in October last. Yet, notwithstanding this, degrees were conferred on six graduates. The "faculty" claim that all these had been students at other colleges for the requisite period; but the matter would certainly demand an investigation.

WASHINGTON.

— In accordance with the provisions of the Bureau of Public Health bill recently passed by Congress, Dr. John S. Billings, United States army, and Dr. F. M. Gunnell, United States navy, have been appointed. Dr. Gunnell has declined in favor of Dr. Thos. J. Turner, who has been appointed in his stead.

— The president has sent to the senate the nomination of Dr. J. B. Hamilton to be supervising surgeon-general of the marine hospital service in the place of the late Dr. Woodworth. Dr. E. Hebersmith, the senior officer in the service, and stationed at New York, in an interview with a *Tribune* reporter, says, "Although standing No. 5 on the list of surgeons, his seniors waive all right to the position by reason of seniority. After passing a creditable examination he entered the army, and served on the frontier. He afterward resigned, and in 1875 appeared before the board of examiners of the marine hospital service, an entire stranger to all, and in a competitive examination obtained the best record in a class of fifteen. He was ordered here as my assistant, and on my recommendation was placed in charge of the marine hospital at Boston two years ago, where he has earned an excellent record in the administration of that hospital. During his first year he reduced the expenditures three thousand dollars. Dr. P. H. Bailhache and myself, as a committee, called upon the president and Secretary Sherman a few days ago, and expressed the views and wishes of the other officers. We feel this to be a critical period in the existence of the service. If the next surgeon-general is taken from outside the corps to fill the vacancy, then the system established by the incessant labors of Surgeon-General Woodworth will be destroyed. A pressure is brought to bear on the president to appoint men outside of the service, among whom are Drs. A. N. Bell, C. C. Cox, and Newell, and a Southern doctor. It is thought that these men hope to gain membership in the National Board of Health through this position, but it is the wish of the service that the surgeon-general shall not be a member of that board, but that one of the subordinates should be designated as in the army or navy."

CHICAGO.

— The authorities of Rush College have established two new chairs in the regular faculty in addition to that of gynæcology: one of dermatology and venereal diseases, to which Dr. J. N. Hyde has been appointed professor, and one of orthopædic surgery, to which Dr. John E. Owens, surgeon to St. Luke's Hospital, has been called.

— At the alumni meeting of the Chicago Medical College, held recently, steps were taken to aid the college in the establishment of a physiological laboratory. A subscription paper was started, and several hundred dollars were subscribed.

— During the last few months in parts of the city an epidemic has prevailed of simple pharyngitis. In some cases the follicular form has appeared, but everywhere the cases have been mild, and so the mortality lists take no account of the fact. Generally the cases have been attended with considerable fever for a day or two, and some pain in swallowing, but in very few have any indications of diphtheria appeared.

— The State Board of Health, and more especially its late president, Dr. Ranch, have been receiving some attention from the legislature now in session, without, however, much damage as yet. It would be unfortunate if what we have gained in medical reform should be destroyed, as it might easily be by ill-advised legislation, but there is apparently not much reason to fear it from this session.

— The Cook County Hospital, which has been the subject of remarks in the JOURNAL, is fairly prosperous under a new and more economical internal administration. The medical board, in regard to whose appointment some criticisms were made, seems harmonious and efficient, and is certainly less open to the objection made to its predecessor, that it was under the predominating influence of a single private medical institution.

ORTHOPÆDIC HOSPITAL, PHILADELPHIA.

CASES WITH CLINICAL REMARKS BY DR. S. WEIR MITCHELL.

Migraine in a Child. — Lizzie T., seven and one half years old, complained of frequent headaches. She is very fair, but of good color; teeth are sound, and not irregular. Family history good, but her mother is also subject to headache. No injury of the head can be recalled, but the trouble came on in August, while playing in the hot sun. She was not unconscious, nor confined to bed after the exposure, but the pain came on suddenly, and was severe; it was accompanied by nausea and vomiting. She had previously been in perfect health, but from that time she has been subject to headache once or twice every week, always accompanied by sick stomach. The headache seems to be getting worse; it always precedes the nausea. She now has attacks at least twice every week, sometimes oftener, coming on generally between noon and evening. She believes that it is not worse in summer than in winter. It is not affected by errors in eating. When the headache comes on, she says that

her eyes get heavy and watery, and the face is flushed, particularly on the left side. The pain is of a throbbing character, which she locates in the forehead, about the middle. There is none at the back of the head. The attack generally lasts a couple of hours, and then terminates in a sick stomach. After the pain leaves her the face becomes pale. At the onset she has occasionally chilly sensations. The eyesight is not affected.

The fact that the headache is not worse during the summer is against the idea of sunstroke. Any one who has been sunstruck is apt to be very susceptible to heat, and exposure always brings on a headache; if a child runs in playing, and overheats itself, it will have the same effect. This seems to be a pretty clear history of hemicranial neuralgia, or migrains, as the English used to call it. There is no pain or tenderness along the spine; her appetite is good. She flushes readily on excitement, is well developed, and of good stature. She has no sick stomach between the attacks, and the bowels are regular. Upon auscultation nothing wrong can be detected in the heart. She never had chills and fever, nor rheumatism.

This is undoubtedly a headache of congestive type belonging to neuralgia, and I have frequently noticed that in such cases belladonna exerts a peculiar influence. In addition to this, small doses of bromide may be given, as large ones generally increase the malady. She shall take

R ^y Potassii bromidi	gr. iij.	20
Tinct. belladonnæ	gtt. iij.	20
Syrup. zingiberis	3i.	4
Aquæ	q. s. ad 3ij.	8

three times daily.

When the attack comes on she is to lie down in a darkened and quiet room. Cold applications to the head and a mustard foot-bath might be useful adjuncts to the treatment.

I may add that the use of the old domestic remedy, a tight bandage, during the attack is useful. I make use of a rubber bandage, applied thoroughly from the eyes up, with a thin pad over each temporal artery, if the temporal ridge be sharp enough to keep the bandage from squeezing the arteries, and over the two occipital vessels. Instead of caoutchouc, a well-applied muslin bandage may be put on, and then wetted, using compresses over the temporal arteries. The comfort thus given is sometimes surprising. I need not say that migraine in some of its forms becomes at times, and in women especially, a most disabling malady, and may recur daily until life is a burden impatiently borne. These are usually cases of thin-blooded and thin people, whose sufferings are brought back by the attempt to take exercise, without an abundance of which a return to health is out of the question. I have seen some such cases in which a cure little less than marvelous has been made by the use of absolute rest, overfeeding, and massage. There is of course much more to be said on the therapeutics of migrains, but no one drug is its master. The hint as to thorough bandaging is worth remembering, and especially at the close of a headache.

Headache; Chronic Meningitis; Opium Habit. — The patient, a man aged forty-five, has had for many years intense and almost constant parietal head-

ache. It is not due to syphilis, and there is some probability that it may be of thermal origin. It is worse at night and in the sun; also, if I percussed the skull with a rubber-tipped percussion hammer, when I got over the pain areas, there was pain given by the blow. Amyl nitrite made the headache worse. Intense heat or cold eased it. The eyes were normal. He had acquired the habit of using morphia to the extent of about five grains daily in hypodermic injections. With the knowledge of this comes the first doubt in the case. I ask myself if he has as much pain as he says he has. The opium habit destroys the normal standards, and leaves him uncomprehensible. If A or B tells me he has pain, I compare it with my notions of pain as he describes its degrees, for we have, unluckily, no algometer or pain measurer; but our conceptions of pain fail us in opium cases, and I think they do so for a very good reason, which I can best illustrate by an example of what may happen in the senses of sight and hearing.

Let us take a not uncommon case: An eminent lawyer from a neighboring county consulted, me, some years ago, for noises in and confusion of his head. His deafness of course caused me to study his ears, when, to my surprise, I found them literally packed with wax. On removing this the drums proved to be singularly healthy, and did not appear to have been compressed. Within a few moments the noise heard in my rooms from the street became overpowering. The tick of the clock, the sound of my voice, and so on, were painfully appreciated. I stuffed the ears with cotton, and twice my patient, thus guarded, attempted to leave my house. Each time he returned, driven wild by the tumult of unaccustomed noises. At last, with other precautions, he went his way, but was forced for a long while to guard his ears from the pain caused by ordinary sounds.

In this case the seclusion from all save very loud sound had lasted many years, and as there was continual effort to hear, nothing was lost, but rather a great acuteness of hearing was gained. Small sounds became great to him, and it was a long while before he got back to the normal standard.

If, in like manner, a man accustoms himself to darkness, or habitually wears tinted glasses, exposure to any bright light becomes painful.

Something analogous to these examples seems to me to be seen in cases where suddenly a long and large use of opium or morphia is abruptly given up. In place of permanently dulling the capacity to feel pain, morphia seems rather to sharpen it, as if disuse, or what I might call the muffling of the nerves and centres, left them with an increased power to feel. So much for the analogies. We have still to remember that a man who has sheltered himself more and more from pain also loses the habitually cultivated power to endure pain. Out of these facts arise some of the difficulties of putting an end to the morphia habit. The disease or pain for which it was begun may have passed entirely away, but the moment the drug is given up the patient is apt to describe himself as having pain in many places, and as suffering, not only immense unease, but also distinct physical torment. It is impossible to disbelieve these statements of real suffering, and I can explain them reasonably only by the aid of such analogies as are offered by cases of long disuse of some of the other senses.

When the patient entered, and I made up my mind as to the nature of his case, I reduced the morphia in three days to one third of a grain daily. At the same time I used a severe counter-irritant resembling that advised by Meyer in the general paralysis of the insane. It consists in rubbing into an inch square of shaven scalp an ointment of equal parts of tartar emetic and lard. The swelling and local and general disturbance thus caused are sometimes alarming. In the case before us the suffering seemed to be unendurable, and was eased by a little chloral. On the fifth day the morphia was abandoned. We had then a severe struggle for one day only, the patient becoming wild and at times delirious, and desiring to leave the ward. His head is now quite eased of pain since the scalp has suppurated freely, and he has been ten days free of morphia. He thinks he will never return to it, and is to be discharged in a day or two. I shall, however, expect to hear from him again, and to learn then that upon some return of pain he has once more fallen under the despotism of this enthralling habit. I may add that he has not suffered from the albuminuria or the diabetes so common in old morphia takers.

Chorea, and its Treatment by Salicylate of Soda.—About four years ago, Julia M., now seven years old, first noticed a quivering of the eyelids, to which she has ever since then been subject, except that in the summer time, when she goes into the country, she thinks it is always better. Gradually the trembling has extended to other muscles, and last spring there was an exacerbation, and her speech and arms became affected. At present she blinks a great deal, but as far as other muscles are concerned the affection seems to be principally confined to the right shoulder and neck. At the heart there is an apex systolic murmur. The patient never had rheumatism, nor had her parents been sufferers from any joint affection. She had intermittent fever several times, and as a child she had whooping-cough and measles. She is moderately anæmic. There is no relative diminution of power in either hand. She has been taking the following prescription for more than a month, and apparently with decided advantage, each dose containing,—

R̄ Sodii salicylat.	gr. x.	67
Glycerinæ	℥ i.	4
Spts. lavendulæ	℥v.	33
Ol. gaultheriæ	gtt. ½	01
Aquæ	q. s. ad ℥ss q. s. ad.	16

given three times a day.

I have been experimenting a little in this case and in a number of others concerning the effects of salicylate of soda in chorea, and it looks as if the experiment would prove to be of some value. The fact should not be overlooked, however, that the tendency to recovery of these choreic cases in the fall of the year is so great that it confuses all therapeutic observations. My colleague, Dr. Gerhard, who also used salicylic acid in chorea, at my request, has made a more exact study of results and time of treatment than I have done, and is satisfied, I believe, that it is a valuable aid in chorea. Using it first in cases complicated by rheumatism or much pain, I have now begun to use it more freely, and in all choreas. After we have had our usual spring crop of choreas, I shall have more to say either for or against the use of salicylic acid and its salts.

I made some time back an effort to learn if chorea is found as often in the black as the white, and to my inquiries I received a mass of interesting answers, which I hope to make use of as soon as I learn more of the prevalence of chorea among these races in the tropics. At present I incline to the belief that the black is very much less liable than the white. I have learned also many other curious facts as to the geographical distribution of chorea, and as to its tendency to recur in the spring-time. I should very much like to know if it displays this same peculiarity in England.

FAMINE AND PESTILENCE IN BRAZIL.

MR. EDITOR, — From the official reports made to the department of state and to the surgeon-general of the marine hospital service by the United States consuls at the ports of Brazil, it appears that famine and disease have prevailed in that empire to an extent unparalleled in modern history, more than one half of the population of the affected districts having succumbed to the combined influences of disease and starvation.

Ceará is one of the northeast coast provinces of Brazil, with an area of four thousand seven hundred square miles and a normal population of nine hundred thousand. In the vernacular, the interior is designated the "Sertao," to distinguish it from the coast region, and the inhabitants "Sertaregos." The country was wholly an agricultural one, with a generally thrifty population. There is not a navigable river in the province, but the Sertao is irrigated by numerous small streams flowing direct to the ocean. The climate of the interior is very hot and dry, being somewhat modified near the coast by the sea breezes. The rainy season extends from January to June, and no rain falling during the rest of the year the streams become dry, and great distress sometimes prevails. Since the summer of 1876 a terrible drought has existed, no rains having fallen in the province from that time to the close of January, 1878, a period of two and a half years, and the once fertile and luxuriant Sertao, where farms and villages prospered in peace and plenty, now presents the appearance of a vast blackened desert burnt over by fire.

The winter of 1877 passed without the customary rains, and the burning heats of the succeeding spring and summer being unrelieved by a drop of rain, the crops failed, and much distress and suffering prevailed; the hopes of relief by the anticipated rains of the succeeding January were not realized, the pitiless drought still continued, and in the spring of 1878 there came to the coast cities "appalling news of famine, disease, dead cattle, and dying, despairing people. The distressed Serteragos diligently practiced their public religious rites, and beat, cut, and punished themselves in the desire to appease an offended Deity. Provisions advanced enormously in price, and many of the people were reduced to subsistence on roots, cotton pods, reptiles, and insects, on the indigenous mucuna bean (which produces dropsy), and on any living or dead thing that would sustain life, and hunger goaded many even to cannibalism.

The depressing vital influences following the want of the necessities of life soon made themselves apparent in the outbreak of typhus and other fevers among the people, and to increase the unimaginable horrors of the situation

small-pox appeared in epidemic form, and in the spring of 1878 the mortality became frightful. By this time the distress had become unendurable, and a general flight of the inhabitants from the interior to the sea-coast commenced. The coast cities received a great influx of starving, diseased Sertaragos, the normal population of twenty-five thousand in Ceará, or Fortaleza, the capital of the province, being quickly increased to one hundred thousand. The open squares of the city were filled with thousands of unsheltered people, emaciated from starvation and smitten with small-pox and other loathsome diseases.

The residents of Ceará did everything in their power for the relief of the unfortunate people, and as soon as the gravity of the situation was recognized the imperial government dispatched every ship that could be obtained, loaded with food and supplies, to Ceará; but these measures of relief only mitigated the prevailing distress, and during the spring of 1878 in the streets of Ceará and the other coast cities scenes of suffering and distress were presented that have few parallels in history.

The suffering from famine was relieved by the efforts made, but small-pox and other diseases continued their ravages unchecked. The ordinary mortality of Ceará is about nine hundred deaths per annum, but since the influx of refugees from the interior it has been increased beyond all comparison. Between November 1st and January 1st the deaths from small-pox alone numbered twenty-eight thousand seven hundred, the total mortality for the two months being thirty-one thousand five hundred and seventy-one. In the new cemetery of Lagoa Funda, opened in the middle of last year, there had been sixty thousand burials up to January 1st. In the sandy soil of the cemetery, trenches six feet in depth and long enough to contain twelve uncoffined corpses were dug, and into these three or four additional bodies were hastily crowded when the corps of grave-diggers could not keep pace with their arrival. The air for nearly a mile around the cemetery is strongly impregnated with the effluvia emanating from the bodies. One half of the original population of Ceará have died of small-pox. Of fifteen thousand "Sertaragos" who fled to Parahyba twelve thousand died, and the place is nearly depopulated. Similar distressing accounts are given of the other coast cities. Official advices state that the ordinary population of Ceará was nine hundred thousand, of whom five hundred thousand have died of disease and starvation. The general want of knowledge or practice of the most elementary principles of individual or public hygiene, the rarity with which vaccination is practiced, conjoined with the depressing influences of the prevailing famine, rendered the people an easy prey to contagious disease after it once gained a foot-hold, and explain the almost unprecedented mortality that has prevailed. The Brazilian government has expended over twelve million dollars for the relief of the sufferers, public works have been inaugurated for giving them employment, and the large numbers herded together in the coast cities have been diminished by the transportation of many of them to other districts. By these measures the prevalence of disease has been much reduced during the past month, and as the last advices report that the first rains for two and a half years have lately fallen in the Sertão, it is hoped that the worst features of the combined scourges of famine and pestilence have been manifested.

R. W.

SHORT COMMUNICATIONS.

LARGE QUANTITY OF ASCITIC FLUID.

MR. EDITOR, — On the 10th inst., Christopher C. Wingo, M. D., of Newport, Va., assisted by his son, Dr. Charles Wingo, and Dr. Dewey Ribble, of Blacksburg, Va., performed an operation for ascites on Mr. N. H. Criner, of Giles Co., Va. By means of trocar and canula between ten and eleven gallons of fluid were removed from the patient's abdomen, *probably the largest quantity ever taken from one person at one time.* The patient bore the operation bravely, was much relieved, slept well the following night, and at last accounts was cheerful, gaining strength, and without any indications of peritonitis or other trouble.

ALLEGHENY TABLELANDS, VA., March 12, 1879.

H.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 15, 1879.

Cities.	Popula- tion estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from					
				The Prin- cipal "Zymo- tic" Diseases.	Pneumo- nia.	Diphtheria and Croup.	Scarlet Fe- ver.	Diarrhoeal Diseases.	
New York.....	1,085,000	604	29.03	19.53	13.41	3.48	8.94	2.33	
Philadelphia.....	—	284	—	—	—	3.52	4.23	—	
Brooklyn.....	564,400	235	24.18	20.00	13.62	8.51	7.66	—	
St. Louis.....	—	102	—	—	15.68	3.92	—	0.98	
Chicago.....	—	145	—	22.76	10.35	15.17	2.07	0.69	
Baltimore.....	365,000	185	19.29	14.00	9.72	5.18	5.18	—	
Boston.....	360,000	159	23.02	15.72	11.32	6.29	3.14	2.58	
Cincinnati.....	—	112	—	26.79	10.71	2.68	16.07	0.89	
District of Columbia.....	160,000	88	28.68	6.36	21.59	1.06	3.18	—	
Pittsburgh.....	—	54	—	24.07	3.70	9.22	1.84	—	
Milwaukee.....	—	41	—	31.95	12.19	24.39	—	2.44	
Providence.....	101,000	39	19.99	15.38	7.69	10.32	2.58	—	
New Haven.....	—	20	—	—	5.00	—	—	—	
Charleston.....	—	19	—	10.53	10.53	5.27	—	—	
Lowell.....	53,300	17	16.63	5.88	11.77	—	—	—	
Worcester.....	52,500	17	16.88	11.77	11.77	11.77	—	—	
Cambridge.....	51,400	25	25.35	20.00	28.00	16.00	4.00	—	
Fall River.....	48,500	—	—	—	—	—	—	—	
Lawrence.....	38,200	11	15.02	—	—	—	—	—	
Lynn.....	34,000	19	29.15	15.80	5.26	15.80	—	—	
Springfield.....	31,500	9	14.90	11.11	11.11	—	11.11	—	
New Bedford.....	27,000	14	27.03	7.14	42.86	7.14	—	—	
Salem.....	26,400	10	19.75	—	10.00	—	—	—	
Somerville.....	23,350	4	8.93	50.00	—	50.00	—	—	
Chelsea.....	20,800	4	10.03	25.00	—	—	—	25.00	
Taunton.....	20,200	6	15.49	16.67	16.67	16.67	16.67	—	
Holyoke.....	18,200	6	17.19	33.33	16.67	16.67	—	—	
Gloucester.....	17,100	3	9.15	—	—	—	—	—	
Newton.....	17,100	—	—	—	—	—	—	—	
Haverhill.....	15,300	7	23.86	28.57	—	28.57	—	—	
Newburyport.....	13,500	5	19.31	—	20.00	—	—	—	
Fitchburg.....	12,500	3	12.51	—	33.33	—	—	—	

Two thousand one hundred and ninety-seven deaths were reported: 370 from the principal "zymotic" diseases, 335 from consumption, 243 from pneumonia, 125 from scarlet fever, 85 from diphtheria, 68 from bronchitis, 49 from croup, 30 from whooping-cough, 26 from typhoid fever, 23 from diarrhoeal diseases, 19 from erysipelas, five from cerebro-spinal meningitis, five from measles, none from small-pox. The total mortality, and from scarlet fever, is about the same as for the previous week; from whooping-cough, bronchitis, and cerebro-spinal meningitis decreased; from the remaining principal "zymotic" diseases and from consumption and pneumonia increased considerably. Philadelphia reported 38 deaths from acute pulmonary diseases, not included above, being about the same as for the previous week.

From *bronchitis*, 28 deaths were reported in New York, nine in Brooklyn and Cincinnati, four in St. Louis and District of Columbia, three in Pittsburgh and New Haven, two in Chi-

cago and Providence. From *whooping-cough*, 16 in New York, four in Cincinnati, three in Boston, two in Brooklyn and Pittsburgh, one in St. Louis, District of Columbia, and Milwaukee. From *typhoid fever*, six in Philadelphia, four in New York and Chicago, three in Baltimore, two in St. Louis and Pittsburgh, one in Brooklyn, Boston, Cincinnati, Providence, and Charleston. From *erysipelas*, seven in New York, four in Brooklyn, two in Chicago and Cincinnati, one in Baltimore, Boston, District of Columbia, and Pittsburgh. From *cerebro-spinal meningitis*, one in New York, Chicago, Baltimore, Boston, and Lowell. From *measles*, two in Brooklyn and Pittsburgh, one in New York. From *trismus nascentium*, one in Charleston and District of Columbia. From *typhoid malarial fever*, one in District of Columbia. The death-rate in District of Columbia was 21.07 among the whites, and 43.33 for the colored population. Nashville remains quite free from "zymotic" diseases, but pneumonia is very prevalent. In Cleveland pulmonary diseases, especially pneumonia, prevail; the severe epidemic of diphtheria has apparently declined. In Louisville, New Orleans, and throughout California, pneumonia has been very wide-spread. In Buffalo and Richmond scarlet fever still prevails. Small-pox is very fatal in Havana, and a bark has arrived from that port at the quarantine station in New Orleans with many cases of yellow fever on board. There have been two deaths reported from "typhoid malarial fever" in New Orleans. The returns from seventeen of the nineteen cities in Massachusetts, with an estimated population of 816,250, showed a decreased mortality from scarlet fever, erysipelas, and typhoid fever; about the same from whooping-cough and cerebro-spinal meningitis; slightly increased from the remaining "zymotic" and from the pulmonary diseases.

Sergeant Purssell's meteorological record for the week, in Boston, is as follows:—

Date.	Barom-eter.	Thermom-eter.		Relative Humidity.			Direction of Wind.			Velocity of Wind.			State of Weather.			Rainfall. (Melted Snow.)			
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7 A. M.			7 A. M.	2 P. M.	9 P. M.	7 A. M.			7 A. M.	2 P. M.	9 P. M.	Duration in Hours.	Amount in Inches.	
		2 P. M.			9 P. M.	7 A. M.	2 P. M.				9 P. M.	2 P. M.	9 P. M.						
March 9	30.245	31	34	26	88	89	79	85	O	S	S	0	10	8	O	O	C	0.6	.06
" 10	30.059	46	61	32	100	67	62	76	S	W	S	4	4	1	R	C	C	—	—
" 11	29.826	44	39	34	92	58	45	64	SW	W	W	15	12	24	O	F	C	1.2	.91
" 12	30.079	34	41	39	89	31	57	52	W	NW	NW	7	19	10	F	F	C	—	—
" 13	30.025	39	46	26	72	43	60	58	W	SW	SW	5	18	10	F	F	C	—	—
" 14	29.805	34	46	35	90	91	199	93	O	E	N	0	10	6	O	O	R	7.5	.22
" 15	29.926	32	42	26	69	39	57	55	W	W	NW	15	19	10	C	C	C	—	—

Weekly Summary.	Barometer.	Thermometer.	Humidity, Saturation being 100.	Wind.	Rain.
	Mean 29.905	Mean 38.3	Mean 69.3	Total miles traveled, 1318.	Total amt. 0.29 in.
	Max. 30.363	Max. 61	Max. 100	Prevailing direction, W.	Duration, 9 hrs. 25 min.
	Min. 29.652	Min. 26	Min. 23		
	Range 711	Range 35	Range 77		

Barometer corrected for temperature, elevation, and instrumental error.

Explanation of weather symbols: O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., snow; L. S., light snow; T., threatening.

Station: Latitude 42° 21'; longitude 71° 4'; height of instrument above the sea, 77.5.

For the week ending February, 22d, in 149 German cities and towns, with a population estimated at 7,512,707, the death-rate was 27.7, an increase of 1.3 from the previous week. There was no very great change in the fatality from "zymotic" diseases, except an increase in the number of places where typhoid fever prevailed. A very much greater fatality from diarrhoeal diseases in children, especially in Berlin and Munich. Acute lung diseases were less fatal, consumption much more so. The typhus fever is not spreading, but rather diminishing. Six hundred and forty deaths were reported from consumption, 450 from acute pulmonary diseases, 189 from diarrhoeal diseases, 184 from diphtheria and croup, 71 from scarlet fever, 55 from whooping-cough, 53 from typhoid fever, 32 from measles, 31 from puerperal

fever, five from typhus fever, one from small-pox (in Ratisbon). The death-rates ranged from 13.9 in Lübeck to 41.2 in Frankfort-on-the-Oder; Dantzic 27.6; Kiel 21; Breslau 33.9; Munich 33.4; Dresden 33.0; Cassel 28.4; Erfurt 28.3; Berlin 23.1; Leipsic 26.1; Hamburg 29.0; Hanover 26.1; Bremen 23.5; Cologne 27.8; Frankfort-on-the-Main 18.4; Wiesbaden 17.8; Metz 40.8.

For the week ending March 1st, in the 20 English cities, having an estimated population of 7,383,999, the death-rate was 26.6, an increase of 1.0 from the previous week: in London 25.5; Portsmouth 19.8; Plymouth 17.6; Birmingham 25.6; Leicester 32.4; Liverpool 33.6; Manchester 34.5; Leeds 30.8. There were in all the cities 514 deaths from diseases of the respiratory organs, showing a progressive increase; 120 from whooping-cough, 103 from scarlet fever, 44 from diarrhoea, 33 from fever, 32 from measles, 16 from diphtheria, and 23 from small-pox (22 in London, one in Manchester). Small-pox caused an increased number of deaths in London, but the new cases apparently are declining in numbers; it is still quite fatal in Dublin, where the total death-rate was 43; in Glasgow 29; in Edinburgh 23.

Small-pox is still rife in St. Petersburg, prevalent in Vienna, Paris, Budapesth, Barcelona, Calcutta, and Bombay; typhoid fever in the Italian cities, Paris, Brussels, and India. No new cases of the pest had occurred at last reports. On the Volga, disinfection by fire, heat, etc., is going on, and the cordon is gradually relaxed. A severe form of typhus fever prevails in parts of Turkey, Roumania, Rumelia, and Russia. In Macedonia a severe epidemic of typhoid fever has been attributed to the consumption of cattle that suffered from bovine typhoid. Great precautions are taken in St. Petersburg in improving the sanitary condition of the city, and in preparations for an increase in the malignant form of "typhus fever," now prevalent there, should it occur. Deaths in various parts of Russia of persons from a disease suspected to be the plague have shown, as always heretofore, that any practicable quarantine or sanitary cordon cannot prevent occasional slips, as some of these suspicious cases came from the quarantined district.

SUFFOLK DISTRICT MEDICAL SOCIETY. — A regular meeting will be held at the hall, 19 Boylston Place, on Saturday evening, March 29th, at seven and a half o'clock. The following papers will be read: —

Dr. William F. Whitney. A Case of Cystinuria, with Renal Calculus.

Dr. James Ayer. A Partial Review of Two Thousand Cases of Midwifery.

Dr. D. Hunt. Conservatism in the Medical Profession.

Supper at nine o'clock.

THE GYNÆCOLOGICAL SOCIETY OF BOSTON. — The one hundred and first regular meeting of the society will be held at Medical Library Rooms, 19 Boylston Place, on the second Thursday of April, at two o'clock P. M. The profession are cordially invited to be present.

HENRY M. FIELD, M. D., *Secretary*.

At the last meeting of the West Chicago Medical Society the resolution given below was discussed and adopted with great unanimity: —

Resolved, That in the opinion of the West Chicago Medical Society, it is the duty of the State Board of Health to procure an amendment of the law relating to the collection of vital statistics, securing the incorporation of those sections of the New Hampshire and Connecticut laws which provide for the compensation of persons who make returns of births and deaths, at the rate of twenty-five cents for each birth or death returned and recorded within the limits of the State.

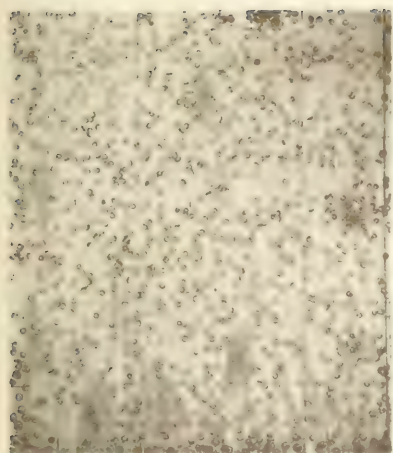
BOOKS AND PAMPHLETS RECEIVED. — *Fasting Girls: Their Physiology and Pathology.* By Prof. William A. Hammond, M. D. New York: G. P. Putnam's Sons. 1879. (For sale by A. Williams & Co.)

Forty-Ninth Annual Report of the State Penitentiary for the Eastern District of Pennsylvania. 1878.

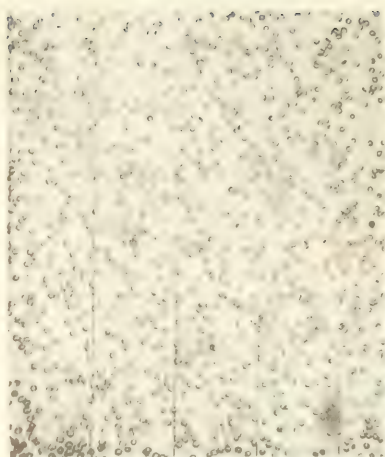
Annual Report of the New England Hospital for Women and Children. Boston. 1878.

Valuedictory Address to the Graduating Class of Jefferson Medical College. By Prof. J. Aitken Meigs, M. D. Philadelphia. 1879.

Address of Joseph K. Edgerton, President of the Board of Trustees, Fort Wayne Medical College, Indiana. 1879.



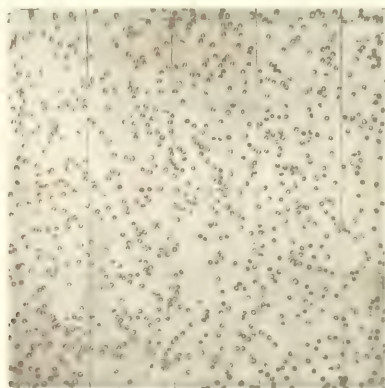
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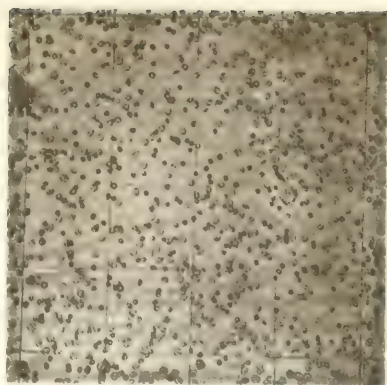


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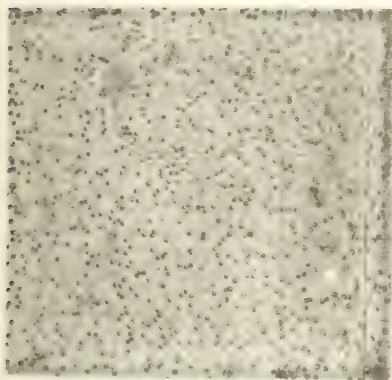
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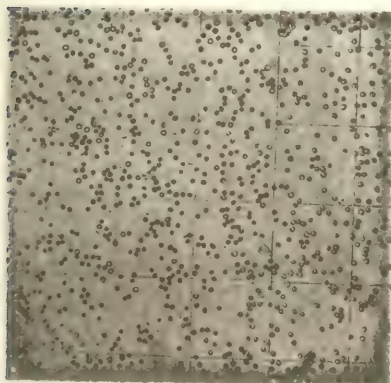
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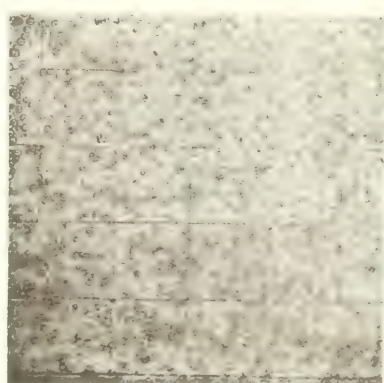
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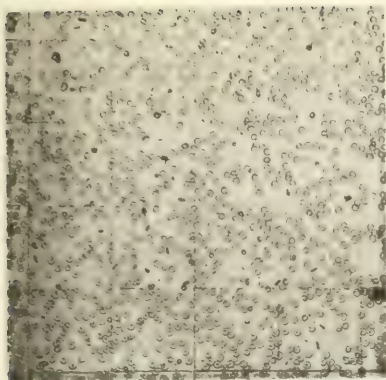
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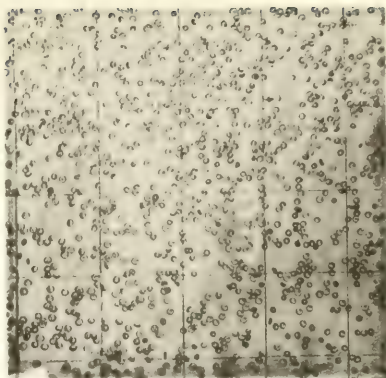
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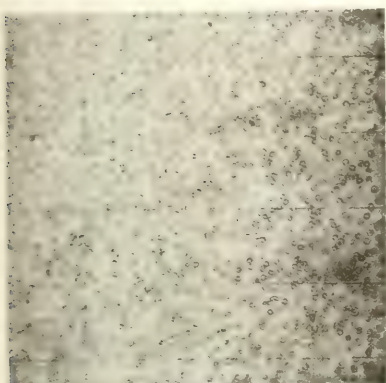
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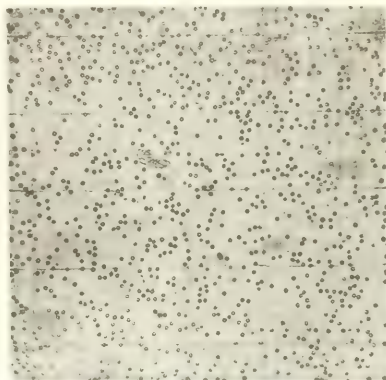
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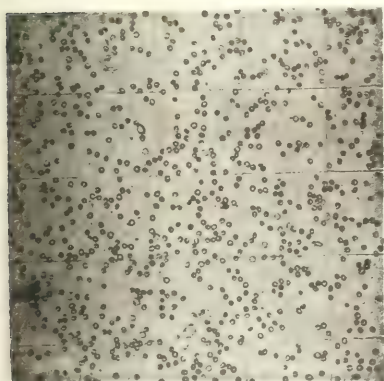
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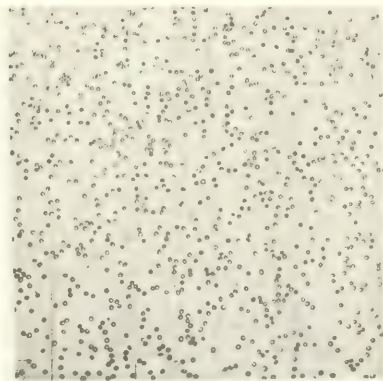
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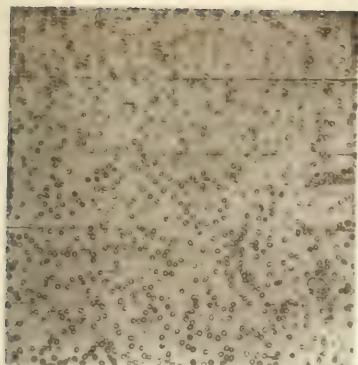
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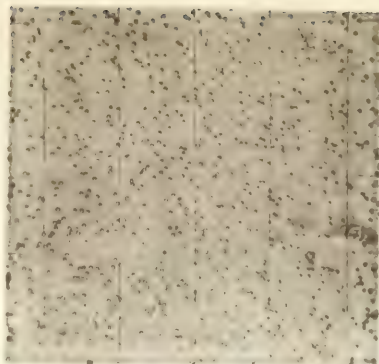
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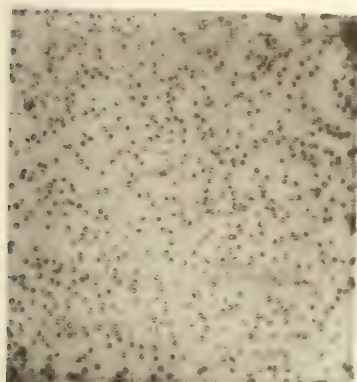
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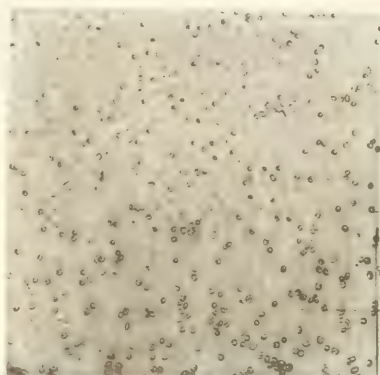
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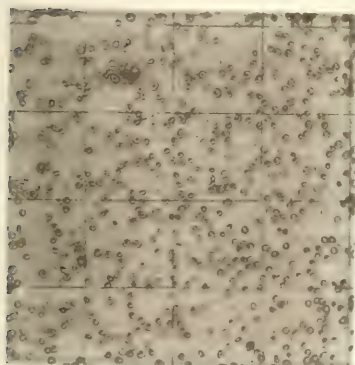
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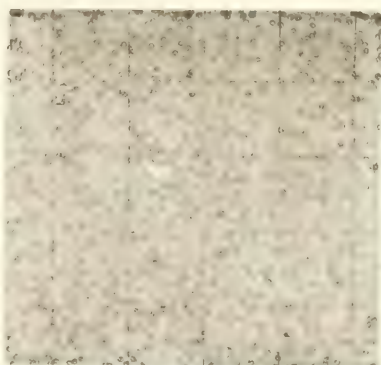
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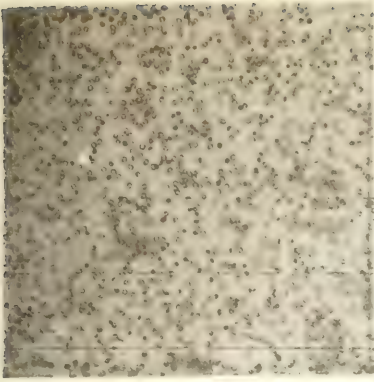


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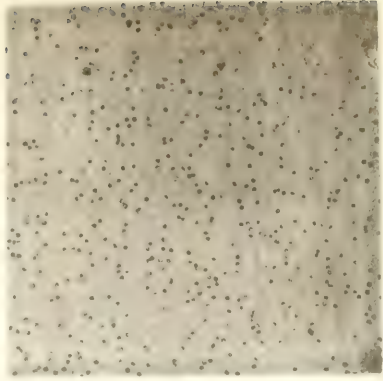


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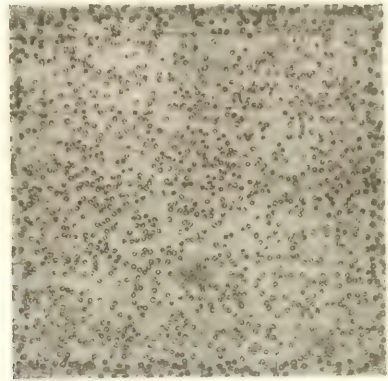
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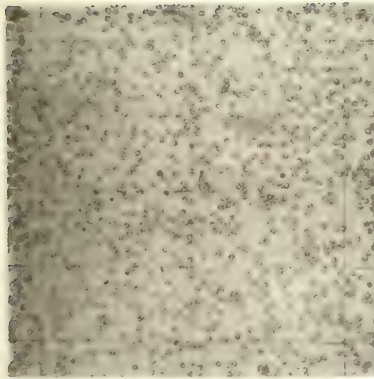
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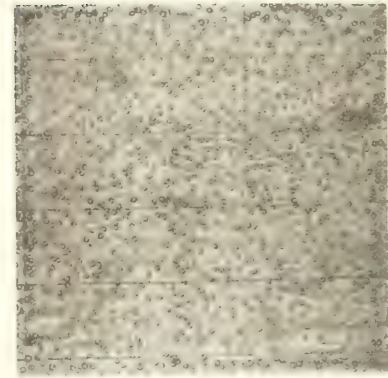
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THE BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. C. — THURSDAY, APRIL 3, 1879. — NO. 14.

EXPERIMENTS AND CLINICAL OBSERVATIONS ON THE HEMATINIC PROPERTIES OF DIALYZED IRON.¹

BY ROBERT AMORY, M. D.

GOWERS's hæmacytometer, the instrument I used in the following observations, consists of a glass slide upon which are ruled squares one tenth of a millimetre in extent, and these are inclosed in a cell one fifth of a millimetre in depth. This slide can be used with any microscope, and with a lens of any desirable magnifying power; moreover, the magnified image of the slide may be projected by means of a prismatic eye-piece upon a screen. The principle of Malassez's "compte globule" does not admit of either of these convenient methods of delineation. In addition to the ruled slide there are two pipettes, one of which holds nine hundred and ninety-five cubic millimetres, and the other five cubic millimetres. The principle and method of using this instrument are then based upon the following facts: If a known measure of blood be carefully drawn from an acupuncture, and intimately mixed with two hundred times its volume of a saline solution (specific gravity 1025) having a density sufficient to prevent the corpuscles from imbibing water, and so bursting their envelopes, these corpuscles, separated from each other, will float in this mixture, and will finally settle down to the bottom of the containing vessel or dish.

In this manner a small portion of the mixed or diluted blood is placed in the above-described cell, and the corpuscles are allowed to settle to the bottom, so as to be nearly on the same plane as the ruled lines, and are pretty uniformly distributed. The number of corpuscles in ten contiguous squares can then be readily counted, and this sum multiplied by the figure ten thousand will give the number of corpuscles in each cubic millimetre of the pure or originally drawn blood; because ten cubes, each one of which has the dimensions $\frac{1}{10} \times \frac{1}{10} \times \frac{1}{10}$ millimetres (or $\frac{1}{1000}$ of a cubic millimetre), will contain $\frac{1}{1000}$ of a cubic millimetre, and since the original blood was diluted with two hundred volumes, the number of corpuscles actually counted in the ten squares must be multiplied by two hundred times fifty, or ten thousand, in order to obtain

¹ Read before the Boston Society of Medical Sciences, January 21, 1879, and the Boston Society for Medical Observation, March 17, 1879.

the number in each cubic millimetre of undiluted blood. If we wish still further to separate the corpuscles from each other, we may use four hundred volumes of the diluent to one of the blood, but in that case we must either count the corpuscles in twenty squares and multiply by ten thousand, or count those in ten squares and multiply by twenty thousand.

The individual or personal error of vision which is associated with all optical instruments is perhaps somewhat difficult to reduce to mathematical accuracy, on account of the fact that constant observation fatigues the eyesight, and hence the results of a series of these observations are subject to an inconstant variation. In consequence of this apparent difficulty, I decided to project upon a photographic plate the image of the corpuscles on the ruled slide, then to print from the negatives, and count upon the print the number of these corpuscles, each one being obliterated as soon as counted.

To show the range of error of this method of obtaining the proportion of globular richness of the blood, I will call your attention to the prints Nos. 1, 2, 3, 4, which were all taken from blood of the same individual from four different punctures, separately diluted, and a sample from each dilution separately photographed.

No. 1	shows	4,656,000	corpuscles	per	cubic	millimetre. ¹
No. 2	"	4,750,000	"	"	"	"
No. 3	"	4,633,000	"	"	"	"
No. 4	"	4,673,000	"	"	"	"

The greatest difference between these four results being only 117,000 shows less than three per cent. of variation. Again, in three separate photographs, taken from one sample on the same slide, a field at either periphery, and at its centre, the variation was even less than that above mentioned. Thus, so far as this method is concerned, the error of variation may be placed within three per cent.

Hearing from certain members of our profession expressions which indicated a skeptical distrust in regard to the virtues of the solution of dialyzed iron, I was induced to undertake a series of observations upon the hæmatinic properties of this medicinal agent, and yet I must frankly acknowledge in advance that my own clinical experience with this form of iron had led me to attach to it a value in simple anæmia, and to place this remedy by the side of Quevenne's iron. I have taken pains to inquire how much metallic iron is contained in the so-called dialyzed iron, and learn that a sample of the scaled dialyzed iron as prepared by one of our large wholesale druggists has been analyzed by Prof. Charles

¹ A reference to the prints will show not more than sixteen squares represented. On the original photographic prints presented at the meetings the count gave an average for twenty-five or thirty squares. To have reproduced this number of squares in each heliotype print would have required too much room. Hence a discrepancy between the numbers of corpuscles mentioned in the text and what may be counted in the illustrations may be explained.

M. Cresson, of Philadelphia, and that he found it to contain fifty-two per cent. of metallic iron, or over seventeen per cent. more than is contained in the sesquichloride of iron; compared with the sesquichloride it is equally soluble, keeps without change, does not corrode the teeth or fabrics with which it may be brought in contact, and contains a greater percentage of iron. The manufacturer from whom this sample was obtained claims that his solution of dialyzed iron has over twenty grains of ferric oxide in each ounce of solution, and in proof of this has shown me a certificate from Prof. F. A. Genth, of the University of Pennsylvania, that a sample of his manufacture, which was purchased by the latter from a retail druggist in Philadelphia, contained 21.69 grains of ferric oxide in each ounce of solution.

The following table of assays of various iron preparations was made by M. Quevenne. One gramme (fifteen grs.) of the following preparations was soluble in two hundred grammes of gastric juice in the proportions named:—

Of 1.0 iron by hydrogen containing 1.000 pure iron was dissolved	0.102 pure iron.
Of 1.0 iron filings	" 1.000 " " " " 0.070 " "
Of 1.0 protosulphate of iron	" 0.210 " " " " 0.056 " "
Of 1.0 protocarbonate of iron	" 0.490 " " " " 0.050 " "
Of 1.0 persulphate of iron	" 0.250 " " " " 0.046 " "
Of 1.0 lactate of iron	" 0.190 " " " " 0.040 " "
Of 1.0 protochloride of iron	" 0.430 " " " " 0.036 " "
Of 1.0 tartrate of iron and potass	" 0.210 " " " " 0.022 " "
Of 1.0 oxide of iron heated to red heat	" 0.700 " " " " 0.016 " "

Forty parts of scaled or dialyzed iron from which water had been withdrawn without aid of heat was levigated very fine and placed in an artificial gastric juice prepared as follows: five parts hydrochloric acid and acetic acid, fifteen parts of pure pepsin, with traces of chlorides of sodium, potassium, and ammonium; also phosphates iron, lime, and magnesium in one thousand parts of water; and temperature was maintained at 100° F. for five hours, then filtered through a "tared" filter, dried and weighed, showing a loss of iron amounting to fifteen parts. This shows that 3.00 grammes of scaled dialyzed iron (containing 1.5 grammes pure iron) are soluble in two hundred grammes of gastric juice.

Having thus compared the properties of dialyzed iron with other well-known preparations, I will report five cases only, in which I observed its effect upon the globular richness of the blood. These were cases of simple anæmia uncomplicated by organic disease, and none of the individuals were placed upon any regimen of diet or exercise, but were allowed to continue their usual habits of life. My object was to prevent

the error of attributing any improvement in health or appearance to an improved diet, or to the more favorable effects of fresh air and exercise. I selected those cases in which I could personally observe the individuals from day to day, and could note any peculiarity of symptoms or unusual mode of life. The instrument which I imported from London was so inaccurate that I was forced to abandon it, as well as the reports of three cases in which it was used, and obtained from Prof. W. A. Rogers, of Harvard College Observatory, some very accurately ruled glass slides. I also procured some pipettes, and carefully estimated their capacity, so that I could place more reliance upon their measurements. I took especial care in the photographs herewith presented not to use various pipettes or ruled slides in the same individual; in the few cases in which (owing to accidental breakage) I was obliged to use more than one set of apparatus, the second set was carefully measured anew, so that my comparative results should not be invalidated.

The circumstances under which the blood was taken from the patient were as nearly similar as possible, and I have a strong confidence that the results of my observations are not materially affected by the method of procedure, and that the error of variation may be safely placed within five per cent. I have not the time in this communication to prove the grounds for this statement, nor would it be worth your while to examine the details of experiment which were used to determine my opinion. The pains that have been taken may perhaps be better appreciated by the careful examination of two hundred photographs, taken under various circumstances and conditions, among which may be mentioned the temperature of the surface after exposure to dry and wet heat and cold, the depth and method of puncture of the skin, blood taken while the patient was depressed by pain or temporary disturbances of other sorts, during the menstrual flow, and before rising from bed in the morning. The variation shown in these photographs is not to my knowledge dependent upon any of these disturbing causes.

CASE I. is that of a woman whose appearance was anæmic, and, as far as I could learn, had no organic disease. An earlier examination of her blood had shown about 3,900,000 corpuscles per c. mm. of blood, but this negative was unfortunately lost. The print No. 5 was taken on the third day after the commencement with the solution of dialyzed iron. I have estimated in this 4,189,000 corpuscles per c. mm., or about eighty-three per cent. of the normal state of health. At first she took her medicine quite regularly, and in ten days gained 171,000 corpuscles, her blood having attained a percentage of eighty-six. The following six days she took the medicine very seldom, and lost 500,000 corpuscles, and was in the same anæmic condition as before treatment, having a percentage of seventy-six. From this time onward she took the medicine more faithfully, but still omitting one dose about every

two or three days, and in five days regained 440,000 corpuscles, having now a percentage of eighty-four. In another week she gained 60,000, and in four days more 160,000, having then a percentage of ninety-six. In the whole period, from December 11th to January 10th, this patient showed an increase of 1,000,000 corpuscles, or an improvement of twenty per cent. During the whole time she was under observation she menstruated twice, but apparently with very slight effect upon the globular richness of the blood. None of these prints, Nos. 5, 6, 7, 8, 9, 10, 11, were taken during menstruation.

No. 5.	December	5th,	4,189,000,	or 83 per cent.	
No. 6.	"	13th,	4,360,000,	or 87 per cent.	
No. 7.	"	19th,	3,850,000,	or 77 per cent.	(Has taken iron seldom.)
No. 8.	"	24th,	4,240,000,	or 84 per cent.	
No. 9.	"	31st,	4,630,000,	or 92 per cent.	
No. 10.	January	6th,	4,820,000,	or 96 per cent.	
No. 11.	"	10th,	4,860,000,	or 97 per cent.	

CASE II. is that of a girl about sixteen years of age, who consulted me for neuralgia, dizziness, especially during the act of stooping, lassitude, and general malaise; she had the habit of awaking with a slight headache, which, towards the latter part of the day, forced her to leave her regular household duties. She had been out to walk two or three times a day, and, like all the other cases, had but slight loss of appetite, a good home, good food, warm clothing, without much requirement for excessive mental or physical work. Her catamenia occurred too frequently, once in three weeks. Without advising any change in diet or occupation, I gave her in water, as in all the other cases, thirty drops of dialyzed iron solution three times a day. I may as well say here that I obtained the solution of dialyzed iron always from the same manufacturer, furnished it directly to each patient, and that it had a uniform standard and purity, so far as I could determine. Its specific gravity was 10.42, and in two instances the solid residue was about twenty-four grains to the ounce of solution. The record of Case II. is estimated from the prints:—

No. 12.	December	16th,	4,070,000,	or 80 per cent.	(Began treatment.)
No. 13.	"	20th,	4,220,000,	or 84 per cent.	
No. 14.	"	28th,	4,370,000,	or 87 per cent.	
No. 15.	January	6th,	4,620,000,	or 92 per cent.	(Discontinued treatment.)
No. 16.	"	15th,	4,500,000,	or 90 per cent.	

All her anæmic symptoms, above mentioned, gradually disappeared, and she omitted the treatment because she felt well, and up to the present time none of these symptoms have reappeared.

CASE III. is that of a young woman about twenty years of age, pale and thin in appearance, who has at previous times been much improved by a ferruginous tonic treatment. She complained of languor, dizziness, muscular fatigue, cold, moist hands, painful menstruation, etc.

*Estimates from prints:—

- No. 17. December 17th, 3,700,000, or 74 per cent. (Began treatment.)
 No. 18. " 31st, 4,700,000, or 94 per cent.
 No. 19. January 15th, 4,200,000, or 84 per cent. (Having a headache.)
 No. 20. " 17th, 4,600,000, or 92 per cent.

Apparently, on January 15th, her headache caused a diminution in globular richness, and for the sake of comparison I show print No. 21 of my own blood, taken during a headache: ordinarily my blood shows over 5,000,000 corpuscles per c. mm.; the number estimated by this print is only 4,350,000.

CASE IV. is that of a clergyman, who had been suffering from neuralgia, headache, an uncomfortable feeling of pressure in the head, and general malaise; these symptoms were aggravated after mental or physical work. Though actively engaged in his professional duties, he led a healthy life, took daily exercise, eating well and at regular times. He had been taking a few weeks previously Carlsbad water, though he had no indigestion or constipation. His record is as follows: Omitting Carlsbad water, he began, December 3d, dialyzed iron solution, half a teaspoonful, diluted with water, three times a day, after meals, and taken regularly; he omitted only one dose during five weeks' treatment. The estimate from the prints is:—

- No. 22. December 3d, 3,800,000, or 76 per cent.
 No. 23. " 13th, 4,500,000, or 90 per cent.
 No. 24. " 28th, 5,191,000, or 103 per cent.
 No. 25. January 6th, 4,900,000, or 98 per cent.
 No. 26. " 16th, 4,500,000, or 90 per cent. (The day after a headache, and iron omitted.)

This was the only headache he had while taking the iron, and his professional work about Christmas time was excessive.

CASE V. A married woman, who has had chlorosis and anæmia for several years, her appearance being white and bloodless, has been a patient of Dr. Sabine's for two years, and her chronic anæmia has been a marked feature; apparently she has no organic disease other than this impoverishment of blood. Figure 27 indicates that the globular richness of blood is only 3,350,000, and at that time she began treatment by dialyzed iron. On one of the last days of February she had diarrhœa, with some catarrh of intestines, which was controlled in two or three days by ordinary doses of morphine and chalk mixture. On March 3d, after a fortnight's use of the solution of dialyzed iron (Figure No. 28), her globular richness had improved to 3,600,000 in spite of the diarrhœa. On March 19th another examination showed 3,600,000 corpuscles per c. mm.

There certainly is good reason for saying that four or five cases are insufficient to establish definitely that the solution of dialyzed iron cures anæmia. However, an analysis of the history of these cases shows that all the individuals were in comfortable circumstances, as far as food, clothing, and homes were concerned; that none of them had any organic

disease (if we except simple impoverishment of the blood); that they were aware of being out of their usual health; that they were unable to accomplish their regular work; that none had impaired appetite, nor feeble digestion; that three of the four suffered from neuralgia or headache; finally, all had diminished corpuscular richness of blood, varying from 3,350,000 to 4,000,000, and that under the continued use of ninety drops of solution of dialyzed iron per diem this condition of impoverished blood was replaced by an increase in the number of corpuscles, from 3,600,000 to 4,900,000, and the symptoms of ill health simultaneously disappeared with this improvement.

Dialyzed iron may increase the globular richness of blood, but it may have no effect in bringing about the chemical combination of oxy-hæmoglobin. If the supposition be true that there is a state of ill health in which the corpuscles may be numerically normal, but may simultaneously be deficient in coloring matter, we may conceive of an anæmic or chlorotic patient who may require some therapeutical means for improving this deficiency other than simple iron. I may have been extremely fortunate in selecting just those cases in which a simple form of iron was indicated, and it may not be impossible that another form would have benefited my cases as much as the dialyzed iron; yet the latter is preferable to the more astringent iron salts, because it does not impair the digestion, nor produce constipation.

I cannot close my communication without an expression of thanks to Dr. Sabine and my laboratory assistant, Mr. J. G. Hubbard, whose material assistance lent much to the value of the record of these experiments.

Now, one final word about the various solutions of dialyzed iron. Many of these solutions are valueless, some are very dilute, and a few are of pretty uniform standard, and contain only the products of dialysis from a salt of iron and distilled water. If physicians use a worthless preparation, they need not expect an improvement in the anæmia; if they use a dilute solution, they must prescribe a larger amount of the solution.¹ In the preparation I used for these experiments the solution had a specific gravity of 1042, and had no free acid.

RECENT PROGRESS IN THE THEORY AND PRACTICE OF MEDICINE.²

BY A. L. MASON, M. D.

Typhoid Fever in Old Persons. — As Peyer's patches begin to degenerate at about forty, and are entirely absent in advanced life, a correspondent in the *Lancet*³ asked whether typhoid fever had been ob-

See JOURNAL, September 21, 1878.

² Concluded from page 432.

³ September, 1878, and The Medical Record.

served in old persons. Several physicians, among them Drs. Wilks and Clifford Allbutt, reported cases of this disease in patients from seventy to ninety. But this was thought by others to be "physically impossible" after the entire disappearance of Peyer's glands, the susceptibility of the individual having ceased. [The ulceration of Peyer's patches does not constitute typhoid fever, being only its most important local manifestation, but in their absence we have no positive means of identifying this affection, which therefore may be assumed to be unproven, or at least very difficult to determine.]

Early Albuminuria in Typhoid Fever. — Professor DaCosta¹ remarks that albuminuria in the *first week* of typhoid fever indicates either an antecedent renal disorder or serious blood alteration due to the febrile process, such as is more frequently met with at a later period, — during the second or third week. He says that early albuminuria never is present unless the case is going to be a very grave one. Weakness of the first sound of the heart at an early period, and a flushed face, especially when accompanied by throbbing of the vessels in the neck, are signs of danger, and call for the use of stimulants and quinine, although the temperature may not be unusually high.

The alarming and sometimes fatal syncope which occurs in typhoid fever, usually from slight over-exertion at the beginning of convalescence, is attributed by M. Huchard² to the coincidence of cerebral anæmia with cardiac debility or degeneration (myocarditis). The therapeutic indications mentioned are to sustain the feeble heart with digitalis, coffee, caffeine, and stimulants, and to counteract the anæmia of the brain by subcutaneous injections of morphine with a view to promoting congestion.

Antipyretic Methods of Treatment. — At a meeting of the Glasgow Medico-Chirurgical Society³ a somewhat wholesale onslaught was made upon the German antipyretic system of treating fevers as laid down by Liebermeister in Ziemssen's Cyclopædia. Professor Gairdner, after reviewing the history of cold-water bathing in fevers from the time of Currie down, criticises in detail the methods of Liebermeister, Brand, and others (which have been described at length in previous reports),⁴ closing with the following words: "I am myself perfectly open to conviction on the whole subject, only I confess I am not yet convinced that it is absolutely necessary to keep a fever patient suspended between pyrexia and collapse by means of cold baths, and still less that it is necessary to half poison him with digitalis and veratria, and then restore him with stimulants, in order to secure his safe passage through an attack of typhoid fever." Professor Gairdner stated that he had not

¹ Medical and Surgical Reporter, February 15, 1879.

² Revue des Sciences médicales, October, 1878.

³ Glasgow Medical Journal, September, 1878.

⁴ JOURNAL, July 6, 1876; March 28, 1878.

adopted the German treatment in any case, although he had tried various ways of reducing the temperature, quinine in ten and twenty grain doses, ice and iced water externally, but rarely baths. In a previous epidemic of typhus (exanthematic) in the Glasgow Royal Infirmary, the mortality—11.5 per cent.—in seven hundred and three cases, under nearly expectant treatment, was thought to compare favorably with Liebermeister's statistics, which showed a mortality of 8.2 per cent. in typhoid fever under "systematic" treatment, that is both antipyretic and specific,—a marked contrast to the previous death-rate from typhoid fever at Basle, which was 27.3 per cent. under "indifferent" treatment. The returns from the Glasgow Fever Hospital, given by Dr. Russell, showed a rate of mortality in typhoid fever varying from six to 14.8 per cent., the treatment, as stated, being nearly expectant, and all cases included. Professor Gairdner intimated that the low death-rate at Basle was due in part to the exclusion of moribund and other patients not deemed suitable for "systematic" treatment. Other members of the society agreed with Dr. Gairdner in thinking that their own treatment was far superior to the German method, which was characterized as "utterly bad" and reprehensible. Dr. McCall Anderson, however, thought that although the antipyretic treatment was not likely to be transplanted to Scotland in its integrity, it was of great value if carried out with due caution. The real danger consisted in allowing the treatment to be pursued too far. He stated that almost all cases of rheumatic fever which proved fatal died from the high fever, and that there were many cases of typhus and typhoid which died from the same cause.

Professor Liebermeister, in a letter to Professor Gairdner in reply,¹ after expressing his dislike for literary polemics, writes as follows: "You have no experience of your own of the working of the antipyretic treatment. You have hitherto used it in a way which, as you rightly judge, I would designate as wholly insufficient. You are, as you frequently say, 'open to conviction,' but how are you to be convinced if you yourself make no observations, and, besides, exercise your authority, justly so highly valued, to prevent others from making such trials? . . . What has been proved useful everywhere in Germany will not be hurtful in Great Britain. . . . As I read the extract which you have given from my article, I could not be astonished if your audience should have shuddered at the antipyretic treatment. It looks as if with us each patient was treated with innumerable baths, immense doses of calomel, quinine, digitalis, and veratria. Such is not the case. The surgeon who, when the preservation of life demands it, makes a free use of the knife does not therefore cut off a leg from every patient who comes to him. The antipyretic treatment is not, as you believe, a matter of

¹ Glasgow Medical Journal, November, 1878.

routine. On the contrary, with it the cases are more individualized than with any other method of treatment. Each agent is used only when necessary: and when none is necessary none is used. But in order to know what is necessary one must of course observe each individual patient much more thoroughly than has hitherto been customary. It is just the routine hitherto pursued, for which we propose to substitute a method of close observation very exacting on the medical attendant, which offers the greatest obstacle to the introduction of the antipyretic treatment."

With reference to the value of the statistics at Basle Professor Liebermeister says: "*We reckon as having died of typhoid every patient who was in the hospital with typhoid and did not leave the hospital living,*" and he is inclined to think that the mortality at Glasgow might be still lower if the antipyretic treatment were adopted, as was the case at many places in Germany where typhoid fever had previously been much less malignant than at Basle. At Kiel, for instance, the death-rate was shown by Jürgensen and Bartels to have been reduced from fifteen per cent. to less than five per cent.

Professor Gairdner's rejoinder reiterates the necessity of caution in adopting, as a routine method, treatment which in his opinion would appear to be often injudicious.

Dr. G. C. Smythe,¹ in a paper on antipyretic methods as applied by him in eighteen cases of typhoid fever in Indiana, reports but one fatal result, which occurred in a man *sixty-two years of age*, after relapses. Ten cases were treated with full doses of quinine, and the remaining eight with quinine and cold baths combined, in one instance thirty-one baths being given during the first week. The author, regarding the degeneration of vital organs from long-continued and unremitting fever heat as the chief source of danger, considers cold baths and quinine indispensable, the latter the more valuable of the two. He calls attention to the fact that "the morning remission does not take place again after the administration of quinine until the fever heat approaches the point touched by the morning remission for that particular case when uninfluenced by treatment."

Salicylic Acid as an Antiseptic and an Antipyretic. — Mr. Prideaux,² after treating with large and continued doses of salicylic acid eighty-eight cases of confluent small-pox with no deaths, the subsequent pitting being also absent, twenty-eight cases of scarlet fever with but one death (some of the cases being very severe), numerous cases of measles and a few of typhoid fever with no fatal results, thinks it probable that "the action of salicylic acid in destroying the lower forms of animal life may be and is of use in restraining the activity and increase of the bioplasmic

¹ The American Practitioner, January, 1879.

² The Practitioner, September, 1878.

particles which appear to be the accompaniment, if not the cause, of pyrexia, as well as in destroying their morbid and contagious influence." From an experience of forty cases of acute rheumatism the author concludes that the action of the drug is almost specific. Certain inconveniences which have been sometimes alarming in nature, such as collapse, delirium, etc., are attributed to want of caution in using large and continued doses, or to the impurity of the drug. The use of salicylate of ammonia is thought to obviate the tendency to collapse due to rapid fall of temperature, and the following prescription, which seldom causes nausea, is recommended: —

R̄ Sodæ bicarb.	grs. v.
Ammonia carb.	grs. v.
Acid salicylic.	grs. xx.
Aquæ	ad f̄i. M.

Frits Levy¹ concludes, from experiments at the Frederiks Hospital in Copenhagen, that salicylic acid in the proportion of from one to two per cent. is efficient in arresting fermentation and as a preservative of urine, serous fluids, etc. The salicylates do not have this property. Eighty-one cases of rheumatic fever were treated with salicylic acid in doses of from seven to fifteen grains an hour, or with salicylate of soda in somewhat larger amounts. The average quantity of acid for each patient was 330 grains, the maximum being about 2900 grains, the minimum 75 grains. The following constitutional symptoms were noticed: sweating in 86 per cent., ringing in the ears 77 per cent., deafness 7 per cent., nausea 22, and vomiting 13 per cent. The use of the acid had to be abandoned in about 9 per cent., always in feeble individuals with chronic maladies, twice for dyspnoea, twice for vomiting, and once each on account of nausea, diarrhoea, and nasal hæmorrhage. In 17 cases, in which previous cardiac complications existed, salicylic acid was well borne, a certain degree of caution being observed in aged and feeble individuals. In about 10 per cent. of the cases the acid had no effect upon the progress of the malady; in the others there was decided benefit. In comparing this series of 81 cases with an equal number of similar cases treated with alkalies and opium, the author finds that the fever abated, on the average, in six days instead of twelve without the acid; the pain in five days instead of thirteen; the average duration of the illness also being reduced from thirty-seven to twenty-eight days. The earlier the cases came under treatment the more satisfactory was the result. Cardiac affections appeared in 8.6 per cent., and mild delirium in 3.7 per cent.; whereas, in those cases not treated with salicylic acid, organic disease of the heart supervened in 20.5 per cent., cerebral troubles in 18 per cent., and pleurisy in 10 per cent. None of the patients treated with salicylic acid died, but among the others the mortality was 7.6 per cent.

¹ Nordiskt Mediciniskt Arkiv, Band x., No. 18.

In conclusion, the author remarks that salicylic acid is inferior to quinine as an antipyretic, and that in rheumatic fever, although not a specific, it is a most valuable addition to our therapeutic resources.

Professor C. Reisz, of Copenhagen,¹ reports 88 cases of rheumatic fever treated with salicylic acid during twenty-three months, and compares them with 134 cases under the former methods of practice in the previous two years. There was no death among those who took salicylic acid, while in the other series were four fatal cases. The duration of the disease, dating from the time the patient went to bed until he was discharged from the hospital, was thirty-five days instead of thirty-nine days, as formerly, the fever subsiding in six days instead of eighteen. The proportion of heart affections in the first biennial series was 43 per cent., of which 28 per cent. developed into permanent organic disease, against 11 per cent. under the salicylic-acid treatment, only two cases, however, being of considerable severity. Pleurisy and pneumonia, which occurred in more than 10 per cent. of the earlier series, did not supervene in any instance when salicylic acid was employed. Relapses were frequent, but of short duration. The acid had to be omitted twice for profuse diarrhœa, twice for vomiting, and once each on account of nausea, epistaxis, and dyspnœa. Parenchymatous nephritis was not aggravated by its use.

Rheumatic Pleurisy.—M. Fernet (Hôpital Saint-Antoine)² mentions a case of double pleurisy with abundant effusion in a patient who had acute articular rheumatism in many joints. The dyspnœa was such that thoracentesis was performed the day after entrance. On the removal of part of the fluid from one side (750 grammes) the rest of the effusion in that side, as well as all of that in the opposite, was absorbed in a few days, and the patient recovered. This rapid absorption in cases of rheumatic pleurisy as compared with effusions from other causes has been frequently observed.

Renal Complications in Rheumatic Fever.—Attention has been called to the occurrence of albuminuria during the progress of rheumatic fever treated with salicylic acid, but it has not been apparent that this symptom was the result of the use of that drug. In this connection the following case, reported by M. Buequoy at the Hôpital Cochin,³ is of interest. A young man, seventeen years old, entered the hospital with a second attack of acute articular rheumatism soon after its onset. The pain, which was very intense, appeared to be relieved by salicylate of soda, but there was great dyspnœa. After several days of treatment with diminished doses, the patient being apparently in a very satisfactory condition, he died suddenly in a renewed attack of excessive dyspnœa.

¹ Nordiskt Mediciniskt Arkiv, Band ix., 1878.

² L'Union médicale, No. 4, 1879.

³ L'Union médicale, No. 4, 1879.

The autopsy showed great inflammatory congestion of the kidneys with commencing fatty degeneration. The sudden death was thought to be due to uræmia, and although it could not positively be attributed to the remedy used, care in examining the urine under such circumstances was recommended.

Bright's Disease. — Professor Charcot, in a valuable course of lectures,¹ again calls attention to the multiplicity in the forms of Bright's disease or diseases, indicated clinically as well as anatomically, and as set forth during the past twenty years, especially in Great Britain, by Dickinson, Grainger Stewart, Johnson, and others. Parenchymatous nephritis, characterized by the large white kidney, Bright's kidney *par excellence*, is regarded as a disease of relatively rapid evolution, usually not more than a year, occurring rarely in old subjects, but often in younger ones, accompanied by dropsy, scanty albuminous urine, which is often of normal specific gravity, and contains many hyaline casts. The epithelium of the kidney is chiefly affected, and uræmic symptoms are not very frequent. In interstitial nephritis, on the other hand, which is a genuine cirrhosis of the kidney, the connective tissue being primarily involved with atrophy of the cortical substance (small red kidney, granular kidney, gouty kidney), the author states that subjects succumb at a later age, often between fifty and sixty, after a chronic illness of perhaps ten years, during which dropsy is absent, until a late period at least, in more than half the cases. The urine is abundant, of low specific gravity. There may be no albumen and no casts. The cases generally terminate in uræmia. Hypertrophy of the heart without valvular lesion and albuminous retinitis are common, the latter almost peculiar to this form. Among the uræmic accidents of interstitial nephritis are habitual dyspepsia with persistent vomiting, temporary or permanent blindness without appreciable retinal changes, headache, vertigo, and tremors. These affections may be present for a long time, with negative urinary symptoms. It has often been noticed that the urine of subjects of interstitial nephritis does not convey the violet odor transmitted by preparations of turpentine, or the peculiar smell from the use of asparagus. In the same manner the kidney seems to be impermeable to opium, of which small doses have produced fatal coma. Small doses of calomel also may cause profuse salivation. Professor Charcot does not assert that the same accidents may not occur in parenchymatous nephritis, or that the two forms may not coexist. He states that the significance of casts has been greatly exaggerated, and after pointing out the frequent occurrence of epithelial casts in various acute diseases, or after the use of diuretics, and of hyaline casts in normal urine, but more especially in cases of jaundice, he says that casts in general are not, as

¹ Lectures on Bright's Disease of the Kidneys. American Edition. Translated by Henry B. Millard, M. D. New York: William Wood & Co. 1878.

they have been called, "faithful messengers announcing to the clinical observer the anatomical condition of the kidney." When hyaline casts are persistent for a long time, however, they indicate as a rule a confirmed lesion. Granular casts, when found repeatedly in albuminous urine, are considered of greater importance. Finally, the emission of casts may be suspended during Bright's disease, or they may be absent for several months. Such a case is mentioned in which eight grammes of an orange-colored mass composed of cylinders were found after death retained in the pelvis and calices. The amyloid kidney and scarlatinous nephritis, being secondary affections, are not considered as properly classified among Bright's diseases.

Citrate of Caffeine as a Diuretic in Cardiac Dropsy. — Dr. Lewis Shapter¹ reports four cases of the successful use of this remedy for the relief of dropsy in advanced disease of the heart. Professor Gubler first drew attention to this property of caffeine. In the cases reported the dose of the drug was limited to three grains once in four hours, owing to its tendency to cause nausea and vomiting in larger doses. The quantity of urine was increased from one pint to three or four pints in twenty-four hours, the action of the heart improving in strength and regularity. Digitalis had been used in some instances without benefit.

The Treatment of Delirium Tremens. — Dr. George W. Balfour² describes the method adopted by him for the treatment of delirium tremens at the Royal Infirmary, Edinburgh, during the past nine years. He points out the tardy appreciation of the fact, so clearly shown by Dr. Ware, of Boston, fifty years ago, that delirium tremens runs its natural course in from sixty to seventy-two hours, and that the remedies employed are often more dangerous than the disease. Such are large and repeated doses of opium and the large quantities of tincture of digitalis recommended by Mr. Jones, of Jersey. Dr. Balfour has found bromide of potassium in half-drachm doses given every hour, for ten or twelve hours perhaps, effectual in many cases. Chloral hydrate, however, is the main-stay, in doses of forty grains every hour for three hours if necessary, and only in the rarest instances has the third dose been required. One hundred and twenty grains, in divided doses, is not considered by the author a dangerous amount, as elimination goes on at the rate of about seven grains an hour. Dr. Balfour regards the use of alcohol after the beginning of an attack, or when an attack is threatening, as entirely bad, and has found it necessary in the course of the disease in the rarest cases only, when the exhaustion is great. Then it delays the cure.

Sunstroke in St. Louis. — Dr. Thomas Kennard, of St. Louis,³ in a

¹ The Practitioner, January, 1879.

² Lancet, February 1, 1879.

³ New Orleans Medical and Surgical Journal, October, 1878.

carefully written and comprehensive article gives the statistics, so far as attainable, of the large number of cases of sunstroke — 3000 or more — in St. Louis last summer. The population of the city is stated at 505,000 at the lowest estimate, and the area at sixty-two square miles. From July 10 to July 20, 1878, the thermometer ranged between 83° F. and 100° F., and during these ten days there were 154 deaths from sunstroke, one third of the total mortality of the city, beside 50 deaths from cholera infantum, 17 from apoplexy, 40 from convulsions, and 34 from other diseases of the brain and nervous system, many of which were attributable to the heat. Seven negroes died from sunstroke. The nationalities were Germany 62, United States 36, Ireland 30, England 6, other countries 10. The proportion of Germans is in accordance with their relative number among the working population, 40 per cent. One hundred and twelve cases were treated at the City Hospital, of whom only nine died. The author attributes the phenomena of sunstroke to the excessive heating of the blood due to loss of function in the heat-regulating nervous centres in the upper portion of the spinal column. Few thermometrical observations or autopsies were made at St. Louis, although, as the author remarks, "the opportunities for such investigations were much better and greater than are likely to occur again in fifty years." According to his observations, however, the temperature ranged from 108° F. to 110° F., and the chief characteristics after death were great congestion and œdema of the lungs, peculiar fluidity of the blood, and generally anæmia, *not hyperæmia*, of the brain, with engorgement of the right side of the heart. From these appearances Dr. Kennard concludes that death takes place from true paralysis of the heart dependent upon derangement of the nervous centres. The treatment was directed to lowering the temperature of the blood by the judicious application of ice and ice-water to the head, the nape of the neck and spine, and if necessary to the whole body, supplemented by the use of the cold douche from a height of three or four feet, fanning, etc. Drachm doses of aromatic spirits of ammonia and stimulants were given as soon as the patients could swallow, and sedatives when required. Bromide of potassium in large doses was found to act as a prompt diuretic. The convulsive cases were not benefited by cold affusions, and some cases needed warm applications and hot mustard baths instead of cold. After the danger is over a cathartic and twenty grains of quinine are recommended. Great caution during convalescence is necessary.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

JUNE 9, 1877. — *The Condition of the Teeth as affected by Uterine Disease.*

— DR. RICHARDSON remarked that it was a fact entirely new to him that the texture of the teeth may be affected by uterine disorder, and this in distinction from the effect of other forms of ill health, and gave the particulars of the case which drew his attention to the subject. Nearly two years ago a young woman was sent by him to Dr. Bradbury for certain operations on the teeth. The dentist reported that the teeth were very firm and solid, — “cut very fine,” in the language of the craft. The patient subsequently had painful menstruation. Three months ago she again consulted Dr. Bradbury, who inferred that she must have some uterine disease, as a peculiar change had taken place, the teeth having entirely altered their structure. Two days ago Dr. Richardson removed a small fibroid tumor from the uterus. — DR. SINCLAIR remarked that it was well known that pregnancy frequently affects the health of the teeth. — DR. HOSMER asked if the change were unlike the structural changes which occur in the other sex. — DR. BIXBY said that Dr. Hawes, dentist, of Boston, some seven years ago wrote a paper entitled *The Interdependence of the Teeth and of the Female Pelvic Organs*.¹

OCTOBER 13, 1877. *Incontinence of Urine after Labor.* — DR. WELLINGTON reported the case, which he said was unique in his practice. The patient was a primipara, twenty-six hours in labor, delivered by the forceps. She did well in most respects, and began to get up in the fourth week, but she could not retain her urine, except to a limited extent. On careful examination nothing like fistula was discovered, and it was decided that the case was one of pure incontinence. She took equal parts of the tinctures of iron and cantharides, and was well in about two months.

Relief of Wakefulness due to Micturition. — DR. CHADWICK said that he was reminded by the last case of a recent experience showing the abnormal effect of the exercise of a simple physiological function upon the nervous system when morbidly sensitive to all impressions. A patient who was under treatment for uterine trouble complained of being roused from sleep almost every night at three or four o'clock by the necessity of emptying her bladder. This act was physiologically performed, but was followed by such a distressing sensation of “goneness” in the abdomen that the patient was generally kept awake and restless until nearly morning. In view of the patient's general hyperæsthesia, and of her having a very hollow abdomen, Dr. Chadwick had conceived the idea that the diminution of the contents of the small abdomino-pelvic cavity by the discharge of quite an amount of urine caused so considerable a retraction of the abdominal walls as to constitute the sole source of the discomfort and consequent wakefulness. Acting upon this theory he had ordered the patient to drink a tumbler or more of water immediately after urinating, by which means nearly as great a volume was introduced into the upper

¹ *Gynæcological Journal*, vol. ii., page 34.

part of the abdomino-pelvic cavity as was evacuated from the lower part. The success of this expedient was perfect; on the next night and subsequently his directions had been followed, with entire relief of the distressing sensations and of the wakefulness. Dr. Chadwick remarked that it was common for people to feel this sense of "goneness" after vomiting, and conjectured that it might arise in part from a similar cause. — Dr. SINCLAIR said that he had obtained decided benefit from the tincture of the muriate of iron with pills of the extract of belladonna in cases in which incontinence had continued for many years. With reference to the case detailed by Dr. Chadwick, he observed that some women will feel worse after a movement of the bowels, and mentioned the fact that the goneness of dyspeptics is often relieved by a mouthful of water. — Dr. GOSS mentioned a case quite similar to that described by Dr. Wellington. Incontinence followed tedious labor terminated by forceps. The symptom disappeared under the use of the tinctures of iron and *nux vomica*.

Ergot in Parturition. — Dr. RICHARDSON said that he had been particularly struck with the way in which ergot was used in the Rotunda Hospital in Dublin. Immediately after delivery an ounce of the infusion of ergot is given. As a rule, the dose is repeated three times a day, in cases of multiparae, for two days. In all cases where there is any tendency to flowing, to a relaxed condition of the uterine walls, or where there is any appearance of tenderness over the uterine region, the infusion of ergot is given in ounce doses, at intervals varying from two to six hours, depending upon the urgency of the symptoms. The result has been, according to the testimony of the physicians, a marked diminution in the frequency and severity of labor pains, the prevention of a tendency in some cases to subinvolution, and the immediate disappearance of all threatening symptoms of an inflammatory nature about the region of the uterus or ovaries. The lochia, also, are less frequently found to be offensive, and their duration is perceptibly shortened. The forceps are very often used, and there is no hesitation shown in applying the forceps to the head in a high position, provided only that the os uteri is at least two thirds dilated and dilatable. The patients, as heretofore, are about the ward, as a rule, on the fifth day, and go home the eighth. The results thus obtained in the Dublin Lying-In Hospital were very similar to what had been observed in the Boston Lying-In Hospital, where ergot is very generally used, although not to the extent that it is in Dublin. — Dr. LYMAN said that for twenty years he had given ergot just before the emergence of the head, and then a dose or two doses afterwards. The proper mode of its administration originated with McClintock and Hardy when they were internes in the Dublin hospital. — Dr. FIFIELD observed that ergot sometimes produced such a contraction of the uterus as to make it difficult to get at the placenta. — Dr. LYMAN replied that he had never had any troublesome closure of the os uteri from its use. When he began practice ergot was considered a very dangerous article, as liable to produce gangrene, and requiring great care in its use. Later, Dr. Brown-Séquard demonstrated its invaluable property of causing capillary contraction, whence has followed its use in meningeal congestion and other affections. Now ergot is administered with the greatest freedom. Dr.

Lyman had given a drachm of Squibb's fluid extract three times a day for months together with marked good effect in nervous troubles connected with uterine disease, and also in fibroid deposits about the cervix uteri.

NOVEMBER 10, 1877. *Abortion; Peri-Uterine Inflammation; Pelvic Abscess opening into Rectum; Secondary Abscess in Abdominal Wall.* — DR. HALL CURTIS read the case: —

H. S., aged twenty-one, Swede, domestic, and single, entered the City Hospital February 16, 1877. Five weeks before entrance she began to flow. This has continued ever since, though lately diminishing. The catamenia had been absent six weeks when the flowing began. Previously she had always been regular. She complained of pelvic pain and general weakness.

R̄ Fld. ext. ergot, gtt. xx. 3 t. d.

February 18th. Uterus is slightly enlarged and antiflexed. The os is largely dilated, admitting with ease two fingers. The cervix contains a soft mass, extending to fundus; this was removed piecemeal with the fingers and forceps, followed by free hæmorrhage. The inner surface of fundus and sides of uterus presented rough ridges, as if portions of the mass were adherent. The vagina and uterus were washed out night and morning with a solution of carbolic acid, and the patient continued very comfortable, with a temperature of 98.7° F., till the night of the 20th, when she had a very severe rigor. February 21st. Morning temperature 104° F. Pulse 120. Complaints of sharp pain under left nipple, worse on coughing, slight headache, and vague pains in hypogastrium. Vaginal discharge slight and offensive. Heart and lungs normal. P. M. temperature 105° F. Quinine was given in three-grain doses every four hours during the next three days. The temperature came down on the 22d to 99° F., became normal and remained so till the evening of the 26th, when it rose to 104° F. This day she had walked about the ward, contrary to orders, and towards evening had severe chill, with intense headache, followed by delirium. Six grains of quinine were given, and the following morning the temperature was 98.5° F., rising at night to 105° F. The uterus was more sensitive, os admitting first joint of finger, followed by slight flowing. February 27th. Morning temperature 98.2° F. Quiniae sulph. gr. vi. at eleven A. M. and twelve M. February 28th. Quinine gr. ij. given at seven A. M., and repeated every hour till noon. The temperature continued about normal till March 5th, when the evening temperature was 104° F., and the catamenia appeared. March 6th. A. M. temperature 102° F.; P. M. 104° F. March 8th. Severe pain in both hypochondria, but especially in right. Was very restless last night. P. M. temperature 99.2° F. March 9th. Feels better. Temperature 100.5° F.; P. M. temperature 101° F. March 10th. Restless night. Had severe chill and vomiting. Now perspiring freely. Catamenia continue. Slight pain in anterior part of right hypochondrium, and also along left sciatic nerve. Poultice to abdomen. March 11th. Had a good night. Very comfortable. Heart and lungs normal. March 15th. Temperature A. M. 100.6° F.; P. M. 100.4° F. Catamenia disappeared day before yesterday, reappeared to-day. The uterus is now fixed; the posterior and left cul-de-sacs filled with a firm and rounded mass, extending well up towards the left iliac region, very tender, with distinct sense of fluctuation. Per rectum, same mass felt, with possibly a fistulous opening felt on anterior wall of rectum, three inches above anus; free discharge of pus from rectum. Poultice to abdomen continued. Hot carbolized douche night and morning. Quinine and sherry.

R̄ Plumbi iodidi	3 iss.
Ext. belladonnæ	gr. xxv.
Ol. theobromæ	q. s. M.

Ft. pessaria No. xii.

One night and morning, March 19th. A. M. temperature 98.2° F. P. M. 98.5° F. Posterior and lateral cul-de-sacs less distended and less tender. Enlarged fundus felt behind pubes, blended with the mass. On posterior and right aspects of uterus, and slightly movable from it, is a round, tender mass the size of a walnut, perceived through the right cul-de-sac, and also through abdominal wall some three inches above pubes, probably in right broad

ligament. March 29th. At times complains of spasms of pain under right ribs. March 31st. A small painful spot is seen and felt in the right hypochondrium, which is slightly swollen.

April 5th. Service of Dr. Arnold. Pain more marked, paroxysms occurring every six hours. Epigastrium and right hypochondrium very tender. Hepatic dullness not increased, as far as can be ascertained, owing to tenderness of part. No pain or tenderness in lower abdomen. Tumefaction in hypochondrium quite marked. April 6th. Intense pain, paroxysmal in character, at eight p. m. Tumefaction, with sense of fluctuation, centres over cartilages of eighth, ninth, and tenth ribs. Abdomen normal. April 8th. Abscess opened with bistoury; a free discharge of glairy pus without offensive odor. Probe passed inwards and downwards two and a half inches, backwards and outwards in direction of liver two and a quarter inches. At this time the walls of the abscess seemed to be continuous, and hence it was considered to be confined to the abdominal wall. Whenever the opening became more or less occluded, pain and swelling would increase, and the patient would show constitutional disturbances, which ceased when the pus was allowed again to escape. April 24th. Two other openings were made in the abscess. May 9th. A month after the first incision, when the abscess was probed, there was a slight serous discharge. This raised the question whether the cavity of the abscess did not somewhere reach the peritonæum. In probing the abscess at different times the probe entered *downwards*, dipping, as it seemed, below the ribs to the distance of four or five inches. The greatest extent of the abscess was always downwards from the site of first incision, never to any length upwards. May 31st. Discharge much less. Seton introduced superficially and horizontally in course of abscess about five inches. June 13th. Uterus now in normal position. On the left side is a hard, distinct mass commencing at upper fourth of cervix, very painful on pressure, and movable with uterus; external os very patulous. June 25th. Catamenia commenced ten days ago and still continue, but diminished. No tenderness whatever throughout vagina; that spoken of on the 13th has entirely disappeared. Sound passes two and three quarters inches. Os patulous from right lateral laceration of cervix depending on last confinement, three years ago. Complains of pain in left iliac region. Abscess in hypochondrium and *umbilical* region still discharging. June 26th. Seton removed. On the 29th the sinus had healed, and she was discharged, well, on the 30th. Dr. E. O. Otis, house physician, to whom I am indebted for the above notes, saw patient some three weeks later. She was then in very good health, and had gained a great deal of flesh.

Dr. Curtis stated further that the peritoneal effusion did not extend up to where the opening took place. There were no hepatic symptoms. The fistulous opening in the rectum was detected by the finger. There was a question whether there existed a sinuous tract extending upwards from the pelvic abscess, so as to point in the high position in the hypochondrium. — Dr. SINCLAIR recalled a case reported to the Boston Society for Medical Observation by Dr. Ellis, many years ago, in which an abscess formed in the lumbar region posteriorly, and the question arose whether it had any direct connection with an abscess in the pelvis. On post-mortem examination a fistulous tract was clearly traced from one to the other. Proof of similar communication in Dr. Curtis's case could be obtained only by following the sinus. — Dr. HOSMER, touching this question, gave the outline of a case which came under his observation ten years ago. The patient was ill conditioned, and the result was pelvic cellulitis appearing soon after labor. There was tumor in the right inguinal region, which became the starting-point of a free and extensive suppuration. As the case went on an opening was made two or three inches above the umbilicus to the right of the median line, and pus was discharged abundantly. The communication in this case was unmistakable; it was actually traced. — Dr. FIFIELD remarked that in abscess of the ischio-rectal space, pelvi-rectal, above the levator ani, pus diffused there can and sometimes does pass forward underneath the pelvic fascia, and become located in the broad ligament.

Examination by the Rectum.—DR. FIFIELD stated that Daniel Molière, a writer on the rectum, has asserted that under favorable positions of the patient, and with the use of an anal speculum, one can see to the sigmoid flexure. Dr. Fifield did not himself think that, with a Sims vaginal speculum, which is the best also for the rectum, it was possible to get a good view of more than the first three or four inches of the bowel.—DR. CHADWICK said he had introduced his hand into the recta of five patients in the wards of the late Professor Simon, at Heidelberg. The practice was to wash out the rectum thoroughly with water; at first, four fingers of the left hand were oiled and introduced into the rectum, distention of the sphincter ani being effected by steady pressure and constant rotation of the hand. Ten or fifteen minutes were occupied in the process. When the hand had finally passed the sphincter all the pelvic organs could be distinctly felt. None of the patients whom he had examined had incontinence for more than a day or two. So harmless did Professor Simon consider this act that he did not hesitate to improve the very first opportunity to instruct the speaker by demonstrating the procedure upon a man who chanced to be upon the table at the time, under the influence of chloroform, with a view to the reduction of a *dislocated thumb*.—DR. ELLIS asked if it were considered right to introduced any hand into any rectum.—DR. CHADWICK said that Professor Simon had fixed the limit to the size of a hand which could be introduced into the rectum with safety at twenty-five centimetres (ten inches) at its largest circumference.—DR. SULLIVAN said that he had been frequently called upon to operate for hæmorrhoids, and that, following the plan of Professor Van Buren, of New York, it was his invariable practice to stretch the sphincter ani by forcible distention with the fingers as a preliminary to the operation. This process, far from resulting in harm to the patient, is a positive advantage both to the patient and to the operator.—DR. FIFIELD spoke of a method of extracting the kidneys post mortem by passing the hand up the rectum. After dilatation a knife is carried up to divide the bowel, and the hand is then enabled easily to reach the abdominal cavity.—DR. SULLIVAN mentioned that he had seen Dr. Spiegelberg, of Breslau, introduce the whole hand into the rectum, in order to examine more thoroughly than he could *per vaginam* an abdominal tumor. No injury resulted.

THE PATHOLOGICAL SOCIETY OF PHILADELPHIA.¹

UPON the title-page of this volume a change may be noticed which is indeed hardly unexpected, yet still somewhat unwelcome. It relates to the transfer of the editorship from Dr. Tyson, who has so long and ably held this office, to Dr. Simes. The task of collecting and preparing the material for an annual publication is one demanding much patience, persistence, and endurance. With these qualifications a large quantity of critical acumen should be combined, and the possession of this implies a wide and varied training. It is needless to remind the reader that the previous editor was everywhere recog-

¹ *Transactions of the Pathological Society of Philadelphia.* Volume Seventh. Edited by J. HENRY C. SIMES, M. D. Philadelphia: Printed for the Society by J. B. Lippincott & Co. 1878. Pp. 175.

nized as filling his part to more than the satisfaction of those concerned, and all must admit that he has earned a deserved rest, or rather the opportunity for undertaking such new work as may present a stronger claim for his energies.

The labors of the society during the year 1876-77, as represented in the Transactions, are hardly up to the standard held by it during the previous years. There are fewer comprehensive papers, reports of cases are less thoroughly and carefully prepared, and critical remarks, though sometimes prominent, are occasionally found lacking.

For instance, the cause of intestinal obstruction (?) in a case of peritonitis appears to be a last resort to explain the occurrence of the fatal disease. It is difficult to conceive that fat tissue surrounding the sigmoid flexure should produce serious constriction, and that an obstruction at a limited part of the colon, of two weeks' duration, should not be followed by a distention of the rest of this tube. The case seems rather one of peritonitis from unknown cause, accompanied by constipation. Another case of equally doubtful character is reported as one of death from embolism in diphtheria. Unfortunately there is no mention of an embolus. A white, hard, and large clot was found to extend from the right ventricle into the venæ cavæ, and "throughout the whole venous system" (?). A similar clot, though smaller, was found in the left heart and its communicating vessels. To regard these clots as rapidly formed thrombi is wholly inharmonious with our knowledge of the appearance of such, their method of origin, and their effects.

In general, the necessity for criticism is not urgent when volumes of transactions of learned societies are considered. The task of the critic properly begins when he has found in the contents matter which he desires to utilize for such purposes as the society may comprehend.

This volume, like its fellows, is offered to the profession as a collection from which various needs may be satisfied, and should not be passed by where the study of special forms of disease is being carried on. The new editor has seen fit to retain the form and arrangement adopted by his predecessor, and has accomplished his work satisfactorily.

R. H. F.

WILSON'S NAVAL HYGIENE.¹

THIS second edition is an improvement on the first. The author, however, still adheres to his original plan, by which much questionable matter is interspersed with some valuable observations. Under Recruiting, strange to say, no mention is made of our admirable training system, whereby boys are made thorough, intelligent, and reliable seamen. The general consideration of Water is good, but the methods given for its examination are very unsatisfactory. The small part allotted to Ventilation simply embraces the author's own views, which are in many instances at variance with the more modern and effective systems now in use. Monitors are notoriously difficult to ventilate, especially

¹ *Naval Hygiene: Human Health and the Means of Preventing Disease.* With Illustrative Incidents principally derived from Naval Experience. By JOSEPH WILSON, M. D., Medical Director, U. S. Navy. Second edition. With Colored Lithographs, etc. Philadelphia: Lindsay and Blakiston. 1879.

at sea, when the hatches are battened down, yet they are hardly given a passing notice. Nothing is said of the exact means for the estimation of carbon dioxide, or the important use of the psychrometer in determining positive humidity. The botanical compilation appears out of place. In the chapter on discipline and punishment, some good ideas have been collected, and are well worth reviewing. It is with pleasure that we see the author strongly recommends the use of the metric system in the navy. The work is designed to meet the requirements of the mercantile marine as well as the navy, but fails to do either.

LEBLOND'S ELEMENTARY GYNÆCOLOGY.¹

WE have been much interested in reading this volume, the subject matter of which the author divides broadly into three parts, namely, Exploration of the Genital Organs, Minor Surgery, and Operations. We naturally expect so large a book, devoted solely to these three subjects, to be exhaustive, and while it proves so in many of its subdivisions, we are in a measure disappointed, in its perusal, to find no mention made of some of the well-recognized and important operations which have now for a long time been performed in this country, and reference to which we have seen in foreign journals. Noticeable among these is Emmet's operation for laceration of the cervix uteri.

About one half the book is taken up with the description of different instruments used in gynæcology, the various methods of exploring the genital organs, and minor surgery, as it is termed, by which is meant the ordinary everyday treatment of the patient, such as the vaginal douche, uterine and vaginal dressings, depletion, adjustment of pessaries, etc.

The remaining half is devoted to operative gynæcology, as, for example, operations on the vulva and perinæum, the urethra and bladder, the vagina, the uterus, and ovaries. Here the author does not attempt to give all the different methods of operating on the parts, but only those which seem most simple and valuable.

In Chapter I. of this part of the book, Article X. on Perineorrhaphy is exceedingly good, and from the numerous illustrations and clear description we do not see how one can fail to understand every step of the operation. Where the tear has extended through the sphincter, the operations of both Emmet and Demarquay are fully described, and Bantock's method mentioned, preference being given to Emmet's, which we do not remember having seen anywhere else so fully illustrated and distinctly described.

Chapter V., also, is quite as good, and even more exhaustive. After giving the honor of first prescribing the rules for amputation of the cervix uteri to Lisfranc, the author proves, from the experience of many surgeons who have frequently done the operation, that it is but rarely accompanied or followed by dangerous symptoms. He considers carefully the anatomy of the parts, particularly the relation of the peritonæum to the uterus, vagina, bladder, etc., also the cellular attachment of the uterus to the adjoining viscera, and deduces

¹ *Traité élémentaire de Chirurgie gynécologique.* Par LE DOCTEUR A. LEBLOND. 8vo, pp. 659. Paris: H. Lanweryens. 1878.

from this his reasons for advocating the operation in place rather than at or near the vulva, the principal reason being the great liability of opening the peritoneal cavity. The experiments on the cadaver, under direction of Gallard, for amputation of the cervix, when this lesion occurred with only very slight traction of the cervix to the vulva, show the importance of operating *in situ*.

We see no mention made of taking advantage of the knee-chest position, whereby the exact vaginal attachment to the cervix may be determined and marked prior to an operation. In many cases the advantages of traction during such amputation might thus be had without the danger of opening the peritoneal cavity. In this operation the author advises the use of the galvano-cautery, particularly in cases of uterine cancer.

We have mentioned but few of the many subjects of which the book treats so fully and so well. It is furnished with nearly two hundred illustrations, which are exceedingly clear and good. We can heartily commend it to the profession, and only wish it might be translated and published in our own country, and its usefulness thereby extended to many who will now be debarred from reading it. We think American gynæcologists should feel highly complimented at the frequent references made in it to them and their methods of treatment and operation.

BARNES ON DISEASES OF WOMEN.¹

THE first edition of this work was extremely satisfactory, and showed small room for improvement; but with the careful revision and additions of the experienced writer and the increased number of illustrations, the second edition is even better than the first, and we gladly admit for it a degree of perfection inferior to none attained by any work in the special department of which it treats.

Chapter I., on the Anatomy of the Pelvic Organs, is particularly instructive. For definiteness of description it is unequalled in any work on general gynæcology with which we are acquainted. We would refer to the author's remarks upon Douglas's pouch, a part of great importance to the surgeon, and one to which Dr. Barnes seems to have given careful attention by observation, on the cadaver as well as clinically, the result of which shows that this pouch "reaches its greatest depth quite on the left of the uterine neck and vagina; so that it lies not only behind these organs, but partly on the left upper fourth of the vagina," descending to this point obliquely from the right side.

We are pleased to find the new chapter on Diseases of the Bladder and Rectum and their relations to uterine disease, matters which have been much neglected in gynæcological works. The subjects of chief interest in the chapter are Retention of Urine, Cystitis, Irritable Bladder, Incontinence of Urine, Primary and Secondary Malignant Disease of the Bladder, and Retention of Fæces. We suppose that the limited space necessarily given to this subject led the author to pass over some points of interest in the local treatment of

¹ *A Clinical History of the Medical and Surgical Diseases of Women.* By ROBERT BARNES, M. D., London. Second American from the second and revised London edition. 8vo, pp. 784. Philadelphia: Henry C. Lea. 1878.

chronic cystitis, which would otherwise undoubtedly have been mentioned, such as the importance of drainage by artificial fistula, or otherwise.

Chapter XVIII., on Effects of Labor and Lactation on the Uterus, is a most interesting one. In fact, it is difficult to select one or another chapter as specially instructive, for each is so complete that we cannot speak too highly of it.

We are a little surprised, after treating so clearly of a lax and half-open state of the anus, dependent upon a rupture of the fibres of the sphincter muscle during labor, without rupture of either the mucous or cutaneous investment, that the author makes no reference to a similar condition of the orifice of the vagina from a sundering of the perineal body, without the mucous membrane or integument being torn. We have been forced to consider this class of cases quite as important as cases of laceration of the perinæum.

The book is rich in thought and clinical experience, and the opinions of other high authorities are so interestingly interwoven that it is by far the most readable work on the subject with which we are familiar.

We commend it most heartily, not only to the specialist, but to the general practitioner, assured that it will prove one of the most instructive and interesting in his library.

THE AMERICAN OTOLOGICAL SOCIETY.¹

THE Transactions form a well-printed volume of one hundred and seventy-eight pages, of which one hundred and twelve are devoted to reports upon the progress of otology and fifty-five to original papers. The reports are of the usual excellence, although it would have been rather more in accordance with general views upon the subject to have treated the development of the ear as pertaining to physiology rather than to anatomy. Dr. Green furnishes, among the original papers, a very interesting contribution to the study of brain murmurs.

THE NEW YORK STATE BOARD OF CHARITIES.

THE twelfth annual report of this excellent organization, which has recently been published and submitted to the legislature of the State, contains much of interest, and shows that the good work undertaken by it, years ago, in a systematic manner as well as a philanthropic spirit, is still progressing as satisfactorily as could be expected.

According to the returns of the respective officers of the various classes of institutions for the care of the poor, the number of inmates during the past year was as follows: In the state insane asylums, 2314; in the institutions for the blind, 361; in the institutions for deaf-mutes, 1142; in the State Asylum for Idiots, 252; in the State Inebriate Asylum, 52; in the county poorhouses, 6840; in the city almshouses, 9651; in the orphan asylums and reformatories, 16,612; in the homes for the aged, 3910; in the hospitals, 2268. The average number of all classes under care in the State the past year, it thus appears, was 43,712. The receipts for the past fiscal year, in-

¹ *Transactions of the American Otological Society.* Vol. ii., Part II.

cluding the cash balance at the commencement of the year, and the amounts received from voluntary donations (\$793,337), the state treasury, municipalities, and other sources, were \$7,909,791.22; and the disbursements during the year were, for buildings and improvements \$820,778.67, for supervision and maintenance \$6,587,975.04,—total, \$7,408,753.71.

Since its organization the board has directed its attention mainly to reforms in the administration of the public charities, as regards their humanitarian influences and the removal of the causes of pauperism: First, by an effort to improve the condition of the poorhouses throughout the State, both as to accommodations and management. Second, by the removal of children from the poorhouses and almshouses. Third, by the removal of the acute insane from poorhouses. Fourth, by urging the speedy transfer of the chronic insane from the poorhouses to the Willard Asylum, and by effecting improvements in the asylums exempted from the operation of the "Willard Asylum Act." Fifth, by securing to the sick in poorhouses proper medical treatment and care in separate apartments. Sixth, by endeavoring to obtain a uniform system of records of the inmates of poorhouses and almshouses. Seventh, by endeavoring to establish a custodial institution for unteachable idiots and feeble-minded persons. Eighth, by a careful and extended examination of the system of outdoor relief for the poor, and by the diffusion of information to officials and the public upon the subject calculated to secure proper discrimination and greater economy in its administration. Ninth, by devising and recommending systems of useful and, whenever practicable, profitable labor for the inmates of poorhouses, insane asylums, reformatories, and other institutions. Tenth, by providing for the unsettled poor, temporarily in the State, proper treatment and care, and providing for their removal to places of legal settlement, or to the custody of friends in other States or countries.

The influx of insane, idiotic, feeble-minded, and other infirm, helpless, or distressed individuals into the State from other quarters, especially from Canada, has hitherto been a fruitful source of pauperism and a large and steadily increasing charitable burden. By an act passed in 1873, however, these classes are now committed, by the county superintendents and other officers, direct to certain poorhouses and almshouses designated by the board, where they are maintained as the wards of the State until disposed of as their several conditions and circumstances, after a thorough investigation of the case, may seem to demand. Since the act has been in force, this work, including the board, clothing, and medical attendance of such persons, and the disbursements for forwarding them to their respective destinations, where this was practicable, has been carried on at an annual cost not exceeding \$23,000, or about \$30 for each individual thus brought under care.

In regard to the condition of the poorhouses throughout the State, the board report a marked improvement, both in the buildings and their internal management, and they consider this largely due to the work of intelligent and benevolent persons who make frequent visits to these institutions and examine into their administration. A part of these visitors act under the authority of the board, while the visits of many others are altogether voluntary. It is to be deeply regretted, however, that in some of the counties no action in the mat-

ter has been taken, their buildings remaining in the same wretched condition in which they were found when first examined.

Another excellent work has been the removal, during the last few months, of all children over two years of age from the poorhouses to asylums and other institutions, and, wherever practicable, to private families. This is in accordance with the law of 1878, and the board is of the opinion that the various asylums are thus doing a valuable service by affording temporary shelter and relief to such children until they can be taken into families living in comfortable circumstances. In no way, it is believed, can public officials, the managers of asylums, and others charged with the care of dependent children more effectually lessen the social evils and burdens of pauperism than by constant and well-directed efforts to secure situations for them in good homes.

The removal of the acute insane from the poorhouses to proper asylums and the speedy transfer of the chronic insane to the Willard Asylum are measures which have engaged the earnest attention of the board; but the latter work has been hampered by the want of sufficient room at that institution to accommodate all that should be sent there. In a few counties little or no improvement is noticeable in the care of the insane, and the old dilapidated asylum buildings, with their loathsome and unsightly surroundings, still remain a blight upon the management of the public charities, and a standing reproach to the counties in which they are situated. The report shows that the total increase of insane in the custody of institutions in the State during the past year was 767. The increase of the chronic insane at the Willard Asylum was 130, and in the various county poorhouses and asylums 179. Of the insane in the latter institutions, 1084 are in counties exempt from the operation of the Willard Asylum act, and this leaves 818 chronic insane in the poorhouses still to be provided for. These insane are generally held in counties which thus far have failed to make adequate provision for their care, anticipating that the State would extend its accommodations in accordance with the act establishing the Willard Asylum, and in some of these counties the condition of the chronic insane is so distressing as to demand immediate relief. These facts and considerations have already been submitted to the governor, at his request, and a presentation of them has been made in his annual message. The board believe that this pressing demand might be, in some measure, complied with if the legislature would convert the present State Inebriate Asylum at Binghamton to the same purposes as the Willard Asylum; since it is claimed that, as at present conducted, the benefits of this institution accrue almost wholly to those who are in no sense the objects of state beneficence.

In regard to the condition of unteachable idiots and feeble-minded persons, the board report that, under an act passed in 1878, which appropriated \$18,000 to the New York Asylum for Idiots for the establishment of a proper institution for the care of this class of unfortunates, the trustees of the asylum have effected the temporary lease of an unfinished school building at Newark, Wayne County, which is capable of accommodating about 140 inmates. The board has also accomplished, in connection with the State Charities Aid Association, many needed reforms in the administration of the public hospitals and other charitable institutions of New York city, and is now devoting special at-

tention to the important subject of tenement-house reform there; so that it will be seen that its work is of an exceedingly wide scope, aiming to embrace, as it does, the whole field of public charity in the State. While many obstacles to the carrying out of its ends have already been overcome, a vast deal of labor still remains to be accomplished; but the measure of success which has thus far crowned its efforts is quite sufficient to encourage it to continue them perseveringly in the future.

One of the latest projects of the board is the establishment of a State Reformatory for Women, similar in many respects to the Massachusetts one at Sherborn, and the matter was recently brought before the committee of ways and means of the Assembly at Albany, when eloquent pleas in favor of the measure were made by Mr. William P. Letchworth, president of the board, and the well-known philanthropist, Mrs. Josephine S. Lowell, who is chairman of the State Charities Aid Association.

REGISTRATION REPORT OF RHODE ISLAND.

THE twenty-fifth registration report of Rhode Island, for the year 1877, we are sorry to see, is the last to be published under Dr. Snow's able editorship, as it is hereafter to be prepared by the State Board of Health. With a population of 258,239 by the census of 1875, there were, in 1877, 4450 deaths, 6235 births, and 2282 marriages reported. The mortality was greater than usual among children, owing largely to the fact that diphtheria prevailed so extensively among them, 92.07 per cent. of the decedents from that cause having been under ten years of age. Six hundred and sixty-one deaths were reported from consumption; 492 from diphtheria; 259 from cholera infantum; 226 from pneumonia and congestion of the lungs; 213 from old age; 182 from diseases of the heart; 181 from apoplexy and paralysis; 135 from cancer; 134 from fevers; 132 from accidents; 95 from croup; 83 from convulsions and fits; 62 from scarlatina. In 1876 diphtheria was seventh on the list, and scarlatina not among the first thirteen causes of death; in 1875 not among the first thirteen, and scarlet fever sixth; in 1874 it was last and scarlet fever second. At the present time, while the mortality of the colored people in our Southern cities is double that of the whites, Dr. Snow's analysis of their record in Rhode Island is especially interesting. His conclusions are that "though the colored population in Rhode Island has been perhaps more favorably situated for prosperity and elevation than in the other Northern States, the statistics show what we have had occasion to remark at other times, that the colored population is not self-sustaining in this State, and that its number (6271) is kept up only by immigration."

MEDICAL NOTES.

—A number of physicians of this city, among them the editor of the *JOURNAL*, having consented to sign an invitation to Dr. E. P. Banning, of New York, to deliver lectures upon the Human Voice and the Physical Education of Children, we wish to repudiate altogether any indorsement of the course as

it is now advertised in the daily papers. We find in the list of lectures one on The Male and Female System, "before gentlemen only," and one on Female Weaknesses, "before ladies only." We do not believe that subjects of this character are suitable for public audiences, and we have had occasion more than once to condemn popular instruction of this character, which is becoming more frequent, and of the unfitness of which we have had one or two striking examples lately.

—The value of dextro-quinine as an antiperiodic has been tested by Dr. Dunlap, of Chillicothe, Ohio, who reports favorably on its action in the *Ohio Recorder*. About two grams given during the night will ward off the chill, without causing deafness or tinnitus aurium. It is well tolerated by weak stomachs. The price is said to be about one third that of quinine.

—The *Lancet* reports this manner of diagnosing thoracic aneurism: "Place the patient in an erect position, and direct him to close his mouth and raise his chin to the fullest extent; then grasp the cricoid cartilage between finger and thumb, using gentle pressure upward; if dilatation or aneurism exist, aortic pulsation will be distinctly felt by transmission through the trachea." The plan seems to have been suggested by Surgeon-Major Oliver.

—In a recent lecture Forbes Winslow spoke at length on the Psychology of Hamlet, and in conclusion said his opinion was that "there is no evidence to prove that Hamlet feigned madness, and that, tracing the delineations of his disposition carefully, there are conclusive facts of the existence of mental aberration followed by complete restoration to health previous to the termination of the play." An interesting synopsis may be found in the *Medical Press and Circular* for February 12th.

—Professor Jaderholm, of Berlin, earnestly warns smokers against the use of paper cigar holders. He has discovered that they contain dangerous quantities of arsenic. This refers especially to holders which are colored green, red, etc.

PHILADELPHIA.

—The distinguished surgeon Professor S. D. Gross having completed the fiftieth year of his professional career, a complimentary dinner is to be given to him by his colleagues at the St. George's Hotel, on Thursday, April 10th. A large number of invitations have been issued, and the profession in different parts of the country will be represented. We beg to tender our congratulations to this eminent man on the brilliant record of his half century's work, and our acknowledgment of the debt which American surgery owes to him.

—Prof. Roberts Bartholow, of the Medical College of Ohio, has been elected to the vacant chair of materia medica and therapeutics in the faculty of the Jefferson Medical College of Philadelphia. It is understood that he will accept the position. The friends of the school consider this an important addition to its strength.

—At the request of the trustees, Professor Stillé has withdrawn his resignation, and will continue as professor of the theory and practice of medicine and of clinical medicine in the University of Pennsylvania. The loss of Professor Stillé would be deeply regretted, and it is with pleasure that we learn that he has consented to reconsider his determination.

—The college commencements took place this year in much the same

manner as usual. On March 12th the Jefferson College held its fifty-fourth annual commencement, graduating one hundred and ninety-six students. The feature of the occasion was an innovation upon the hackneyed charge to the graduating class by the delivery of a valedictory poem, by Prof. J. A. Meigs.

—The University of Pennsylvania held its commencement March 14th, when Chas. J. Stillé, provost, conferred the degree of doctor of medicine upon ninety-one graduates. There were seven graduates in dentistry.

—Dr. Edward T. Caswell, of Providence, Rhode Island, delivered the annual oration before the Alumni Association of the Jefferson College on Alcohol from a Medical Standpoint, which gave a fair exposition of the opposing views that are now under discussion. At the annual meeting an important step was taken by the Alumni Association, which fully met the approval of Professor Gross. It was in reference to the circular lately issued, calling the attention of the trustees and faculties of colleges to the convention to be held in Atlanta, May 2, 1879, of delegates from all the regularly organized and accredited medical schools of the United States. After this was brought to the attention of the meeting, resolutions were passed favoring the extension of the term of instruction, and insisting upon a graded course, and a committee was appointed to lay the matter before the board of trustees of the Jefferson College, and request that a delegate be sent to this important meeting. The time is rapidly approaching when popular opinion will demand that the standard of medical education shall be raised, and that a diploma shall be less easily obtainable than it is at present. Those institutions that accept the situation gracefully and take the initiative in the matter will carry off the laurels.

CHICAGO.

—A correspondent writes us the following: It is said that only seventy-five per cent. of the candidates for graduation at the Chicago Medical College succeeded, and that the great majority of the successful ones had had a fair academic or collegiate training before entering on their medical studies, — a pretty good showing for a Western institution. It is this college that claims to be the first in the country to adopt a three years' graded course, and though its friends admit that there is, as in every American medical school, much yet to be desired in its course of instruction, they point to the fact that its graduates carry the majority of the positions here open to competitive examinations as an evidence of at least its comparative excellence. Some twenty years since Dr. Byford, together with Drs. N. S. Davis, H. A. Johnson, Edmund Andrews, and others, left Rush, and founded the Chicago Medical College for the avowed purpose of improving the standard of medical education and introducing into this country a graded system of medical instruction. The faithful services of these gentlemen during all these years have established the principle and made the institution a success, and now its friends think that it can well spare a little of the reform element to be retransplanted into the old ground. The world moves. In this connection it is stated incidentally that Dr. A. Reeves Jackson, who had the natural succession to the place made for Professor Byford, and who was serving in the spring faculty of Rush Medical College, has been much animadverted upon by the newspapers, and it has even been proposed that the authorities abolish the medical board altogether, placing

the hospital under the charge of a salaried superintendent. There is, however, very little probability that this will be done very soon; the danger of obtaining the wrong man is realized by the authorities, who are happily at present not altogether the same individuals who were in power a short time ago.

WASHINGTON.

—The following gentlemen have been nominated for membership of the National Board of Health: Dr. H. I. Bowditch of Boston, Drs. Bemiss and Cabell of New Orleans, Dr. Stephen Smith of New York, Dr. Mitchell of Memphis, Dr. Johnson of Chicago, Dr. Verdi (homœopath) of Washington, Dr. Billings of the United States army, and Dr. Thomas J. Turner of the United States navy, in place of Dr. Gunnell, who declined. There is still one vacancy. All of the appointments made by the president have been confirmed by the senate, with the exception of Dr. Stephen Smith, of New York, and Dr. Tullio S. Verdi (homœopath), of Washington. Dr. Verdi was for a time a member and secretary of the District Board of Health. The provisions of the bill establishing the board allows of the construction that exclusive of the special appointments named the members serving should be residents of the States, thus leaving the District without the right of representation.

The *personnel* of the board as at present constituted is Dr. Billings, U. S. A., Dr. Turner, U. S. N., Dr. P. H. Bailhace, United States Marine Hospital Service, Solicitor-General Phillips, Department of Justice, Dr. S. M. Bemiss, New Orleans, La., Dr. Henry I. Bowditch, Boston, Mass., Dr. Joseph L. Cabell, Charlottesville, Va., Dr. Henry A. Johnson, Chicago, Ill., Robert W. Mitchell, Memphis, Tenn. They will probably begin their sessions at once.

—Dr. John C. Riley, for twenty-eight years a practitioner of medicine in this city, died February 22d, aged fifty-one years. He was, at the time of his death, professor of materia medica and dean of the National Medical College. His death leaves the committee for revision of the American Medical Pharmacopœia without a single member or authority to convoke the same.

—The fifty-seventh annual commencement of the National Medical College, Medical Department of the Columbian University, was held March 20th, at Lincoln Hall, with the usual exercises. The graduates were eleven in number, including Horatio R. Bigelow and Solon B. Stone, of Massachusetts; Dr. Bigelow receiving the thesis prize and honorable mention for proficiency in the written examination for his degree of M. D. Prof. J. Ford Thompson gave the address to the graduates on the part of the faculty, and in the course of his remarks noted the fact that there was not at present in the District of Columbia a suitable hospital open to a poor white man.

ST. LOUIS.

—During the last few months there has been an unusual amount of erysipelas in the wards of the St. Louis City Hospital, which is occupied almost exclusively by men, and of erysipelas and puerperal fever in the hospital for women. These hospitals are some three miles apart, and there is very little communication between them. Erysipelas has originated in the wards of the woman's hospital, attacking those who had been brought there for other diseases, and who had not been exposed to it, a thing which has very rarely hap-

pened in the institution. At the same time a number of cases of puerperal fever occurred, whereas during the last four years the disease was almost unknown in the building. Erysipelas has also been quite annoying to the surgeons in their private practice. With regard to the amount of puerperal fever in private practice it is stated that there is more of it than usual. The association of these two maladies is interesting, and would seem to indicate that they are due to a similar epidemic cause.

MASSACHUSETTS GENERAL HOSPITAL.

SURGICAL CASES OF DR. WARREN.

Laceration of the Cervix Uteri.—The patient, twenty-five years of age, was a small, anæmic person, the mother of four children. Her suffering dated from the birth of the last child, three years before. The local symptoms were backache reaching from the sacrum up between the shoulders after any exertion, leucorrhœa, which had improved under local treatment, and increased catamenial flow, the interval between each period being but three weeks. These symptoms had prevented her from doing any of her accustomed hard work about the house, and her general health had steadily deteriorated. Careful local treatment had cured an erosion of the cervical mucous membrane, but failed to improve her condition. The uterus was not low in the pelvis, but was slightly anteverted. The laceration was in the left side, and extended well up to the reflexion of the mucous membrane of the vagina. There was no cystic degeneration of the exposed cervical membrane. The patient entered the hospital the day after the catamenia had ceased, and remained in bed a week, having had also a week's rest in bed at home. Hot vaginal douches were administered daily. The operation was performed under ether, the patient being upon her back as for lithotomy. Scissors were used to refresh the edges of the laceration, and the wound was brought together with seven wire sutures. The parts were made readily accessible by drawing down the cervix with a pair of double hooks. The bleeding was slight. The stitches were left in over the next catamenial period, owing to its unexpected appearance, and were removed on the eighteenth day. The patient was kept in bed a month, with the foot of the bed raised, douches being administered daily. The only sensations experienced after the operation were slight pains on the second day like after-pains. Three months after the operation the patient reported herself. There was entire relief from the old local symptoms; "she had gone four weeks for the first time for nearly four years," and her general condition was steadily improving.

Large Cyst of Anterior Wall of Vagina.—The patient, twenty-five years of age, first noticed a bunch in the vagina seven years before. Of late it had protruded from the vulva, and on examination was found to be of the size and shape of a medium pear. The posterior wall of the tumor appeared to be continuous with the anterior lip of the os, and the anterior wall with the mucous membrane near the meatus. The tumor was soft and fluctuating. The patient being etherized, the cyst was readily dissected out, together with a portion of

the mucous membrane, which was adherent. It contained a brownish-colored, ropy fluid. The wound was stitched with catgut sutures, and on examination two weeks later showed the only trace of a cicatrix to be a short linear depression, about three fourths of an inch in length, in front of the anterior lip of the cervix. The patient has been relieved from bearing-down pains, and has since married.

Three Cases of Procidentia Uteri. — The operations performed in these cases were practically identical with one another. Anterior and posterior colporrhaphy were performed at one "sitting." A piece included between two semi-elliptical incisions was peeled off the vesical wall, the wound thus made extending from about half an inch from the meatus nearly to the top of the anterior cul-de-sac of the vagina. On the posterior wall a broad band of mucous membrane was removed, extending from about an inch from the top of the posterior cul-de-sac to the fourchette, where the wound was widened so as to make a thick perineal body. Catgut sutures were used in both vaginal wounds, and fine silver sutures, introduced after Emmet's plan, in the perineal wound. This plan of procedure, it will be seen, avoided the numerous etherizations necessary when each operation is done separately. The operations were performed with the patients in the dorsal position.

CASE I. K. K., forty years old, a short, stout Irishwoman, had a cystocele of eighteen years' standing. She had also an inguinal hernia, and as there was considerable difficulty in getting a clear statement from her, it was not possible to determine to what extent the latter trouble was responsible for the various pains she complained of. The cervix and anterior vaginal wall were found protruding from the vulva. The cervix was drawn down, while the anterior portion of vaginal mucous membrane was removed, the wound measuring one and one half by two and one half inches. The vagina was washed out daily during convalescence with a weak solution of carbolic acid, and the urine was drawn daily for a week. The silver sutures were removed on the sixteenth day. The patient was kept in bed two months, and after being allowed to walk about for a few days, the parts keeping well in their normal position, she was discharged. The patient was seen several months later, and the condition of the parts was found to be perfectly satisfactory.

CASE II. C. E. B., fifty-two years of age, of very much the same build as the previous patient, had suffered for seven years from "falling of the womb," brought on, she thinks, by lifting a heavy weight. The womb occasionally protruded from the vulva, but for seven weeks before entrance this condition was permanent, and she suffered considerable pain. On examination, the uterus, bladder, and rectum were found to form a tumor projecting from the vulva two or three inches when the patient was in the erect posture. There was laceration and erosion of the cervix. The patient was kept in the horizontal position for a week or two previous to the operation, and hot douching was employed. During convalescence the urine was drawn for a week, and the douches were continued. The bowels were moved on the third day. The silver sutures were removed on the fifteenth day. The patient was kept in bed nearly two months, and when she was finally discharged the parts were in excellent position, and entire relief had been obtained to all symptoms. Subsequent attempts to hear from the patient have been unavailing.

CASE III. This case was by far the worst of the three. Procidencia was complete, the entire uterus being outside the vulva, and retroflected so as to lie on its posterior aspect at the bottom of the everted pouch. There was double laceration of the cervix, but it was not thought advisable to operate upon it. A finger passed into the rectum and a sound passed into the bladder came forward into the tumor. The patient was twenty-three years of age, and had had syphilis, numerous pigmentations of the skin marking the seat of the eruption. The mucous membrane was dry and parchment like. The uterus was replaced and the patient kept in the recumbent posture, and vaginal douches were given for ten days. The operation was performed as in the previous cases, and the after-treatment was the same. The bowels were moved during the night of the sixth day without enema or assistance of any kind from the nurse, and a portion of the posterior vaginal wound tore open, but enough narrowing of the vaginal passage was obtained to keep the parts well in place. The patient left the hospital at the end of six weeks, being advised to keep in the recumbent posture for several months, and to report again the coming summer.

Noteworthy points of interest in these cases were the extent of the displacements, and the readiness with which they were overcome by one effective operation.

SHORT COMMUNICATIONS.

THE MARINE HOSPITAL SERVICE.

MR. EDITOR, — I beg space to reply very briefly to a paragraph in your last issue under the heading of *A Needful Change*, by an "efficient" naval medical officer, I suppose. Now when official records show, as they do, that the marine hospital service provides medical and surgical treatment to more patients than the navy and army together, and that the cost for such treatment is much less than that for either of those departments, the presumptuousness of "Efficiency" is apparent. Naval seamen, says a member of a congressional investigating committee, can receive medical treatment at the Fifth Avenue Hotel cheaper than in a naval hospital. It might with justice be asked if such a showing is due to efficiency, and whether it shows partial or perfect development. Again, statistics show that there are only three and a half seamen to one officer in the navy to enable medical officers to gain "*years of experience*" in the medical treatment of sailors. Granting that a few years on shipboard in such a vast field of professional labor admirably qualifies such officers for *shore* duty in the marine hospital service, yet it is suggested that *shore* duty might be obtained by asking for the control of the medical department of the army, and perhaps that would be preferable, considering the military feature of the establishment. The marine hospital service was established by law in 1798, and it is safe to say that as a rule the medical officers of that service have had more experience in medical treatment of sailors in hospital than those of the navy. It seems rather strange, however, that such accomplished gentlemen did not think to ask for the control of the service until it was reorganized on a proper basis by the lamented Woodworth.

H. W. S.

DR. EASTMAN'S RESIGNATION.

At a meeting of the New England Psychological Society, held at the Bay State House, Worcester, Mass., March 13, 1879, the following resolutions were passed, and it was voted that a copy of them be given to Dr. Eastman, and another copy offered for publication to the Boston Medical and Surgical Journal: —

Resolved, That in the departure from New England of our colleague and associate, Dr. Barnard D. Eastman, to another and remote field of labor in the specialty to which he has for many years been successfully devoted, this society loses, as an active member, the man who first took measures for its foundation, and whose continued interest and energy have largely contributed to its success.

Resolved, That among the fruits of the work thus begun by him is the establishment of a unity of sentiment, a friendliness of feeling, and a harmony of action among the officers of the institutions for the insane in New England, such as had never previously existed, and such as cannot fail to contribute — which has, indeed, already contributed — to the improvement of those institutions.

Resolved, That in the new hospital at Worcester, Mass., designed, erected, and put into successful operation under his supervision and direction, the plan of which includes many special features original with him, Massachusetts has an establishment which ranks among the very best of its kind in the world.

Resolved, That while we, as individuals, lose the companionship of a highly respected associate, we can congratulate the people of Kansas upon the acquisition for the management of their new institution not alone of an able, industrious, devoted, and faithful superintendent, but furthermore of a specimen of "the noblest work of God," an honest man.

H. M. QUINBY, M. D., *Secretary*.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 22, 1879.

Cities.	Population estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from					
				The Principal "Zymotic" Diseases.	Pneumonia.	Scarlet Fever.	Diphtheria and Croup.	Diarrhoeal Diseases.	
New York.....	1,085,000	623	29.94	21.03	12.68	10.43	3.53	1.93	
Philadelphia.....	—	378	—	12.23	9.35	4.32	4.68	0.35	
Brooklyn.....	564,400	208	19.22	—	—	3.84	5.76	—	
St. Louis.....	—	114	—	7.89	11.40	—	2.65	1.77	
Chicago.....	—	137	—	20.44	8.03	4.30	11.68	0.72	
Baltimore.....	365,000	147	21.00	17.68	15.00	4.08	6.80	—	
Boston.....	360,000	147	21.29	13.61	8.16	2.04	9.52	0.68	
Cincinnati.....	—	116	—	28.45	12.07	15.17	5.06	1.69	
District of Columbia...	160,000	97	31.87	10.39	25.77	5.16	2.08	2.08	
Pittsburgh.....	—	42	—	19.05	19.05	2.38	2.38	2.38	
Milwaukee.....	—	44	—	11.11	2.22	—	4.45	—	
Providence.....	101,000	30	15.49	20.00	6.67	—	10.00	—	
New Haven.....	60,000	26	22.57	7.69	11.54	3.84	3.85	—	
Charleston.....	—	19	—	15.79	15.79	—	10.53	5.26	
Lowell.....	53,300	19	18.58	21.05	21.05	—	15.79	—	
Worcester.....	52,500	23	22.84	21.74	17.39	—	8.69	—	
Cambridge.....	51,400	17	17.24	23.53	11.77	5.88	11.77	—	
Fall River.....	48,500	21	22.58	9.52	14.29	4.76	4.76	—	
Lawrence.....	38,200	17	23.21	5.88	5.88	—	—	—	
Lynn.....	34,000	16	24.54	18.75	12.50	12.50	6.25	—	
Springfield.....	31,500	10	16.55	10.00	30.00	—	—	—	
New Bedford.....	27,000	10	19.31	10.00	—	—	—	—	
Salem.....	26,400	15	29.63	6.67	6.67	—	6.67	—	
Somerville.....	23,350	9	20.10	22.22	—	11.11	11.11	—	
Chelsea.....	20,800	5	12.54	—	20.00	—	—	—	
Taunton.....	20,200	10	25.81	20.00	—	10.00	10.00	—	
Holyoke.....	18,200	9	25.79	22.22	22.22	11.11	11.00	—	
Gloucester.....	17,100	8	24.39	—	25.00	—	—	—	
Newton.....	17,100	4	12.20	25.00	—	—	—	—	
Haverhill.....	15,300	5	17.04	40.00	—	—	40.00	—	
Newburyport.....	13,500	8	30.90	—	12.50	—	—	—	
Fitchburg.....	12,500	6	25.03	16.67	—	—	16.67	—	

¹ Not reported.

Two thousand two hundred and twenty-three deaths were reported: 346 from the principal "zymotic" diseases, 323 from consumption, 244 from pneumonia, 133 from scarlet fever, 74 from diphtheria, 70 from bronchitis, 49 from croup, 37 from whooping-cough, 26 from diarrhoeal diseases, 20 from typhoid fever, 14 from cerebro-spinal meningitis, 11 from erysipelas, four from measles, none from small-pox. There is an increase in the total mortality

from scarlet fever, cerebro-spinal meningitis, whooping-cough, and diarrhoeal diseases; a decrease in diphtheria, erysipelas, typhoid fever, and consumption; measles, croup, acute pulmonary diseases, and all "zymotics" remain about the same.

From *bronchitis*, 33 deaths were reported in New York, six in Philadelphia, Cincinnati, and District of Columbia, five in Chicago, four in St. Louis, three in New Haven, two in Baltimore and Providence, one in Pittsburgh, Milwaukee, and Charleston. From *whooping-cough*, 26 in New York, four in Cincinnati, three in Baltimore, one in Philadelphia, Pittsburgh, Milwaukee, and Providence. From *typhoid fever*, four in Philadelphia, two in Brooklyn, St. Louis, Chicago, Cincinnati, and Pittsburgh, one in New York, Baltimore, Boston, Providence, Worcester, and New Bedford. From *cerebro-spinal meningitis*, two in Philadelphia, Chicago, Baltimore, and Milwaukee, one in New York, St. Louis, Cincinnati, District of Columbia, Worcester, and Cambridge. From *erysipelas*, four in New York, two in Baltimore, one in Philadelphia, St. Louis, Chicago, Boston, and Providence. From *measles*, two in Baltimore and Pittsburgh. From *remittent fever*, two in District of Columbia. From *trismus nascentium*, one in Charleston. From *congestive and intermittent fevers*, each one in Baltimore. Scarlet fever and diphtheria continue to prevail in Buffalo, diminished very much in Cleveland. The death-rate of whites in District of Columbia was 21.58, for the colored population 51.04. Pneumonia remains very fatal in Cleveland. The returns from the nineteen cities in Massachusetts, with an estimated population of 893,500, showed an increased mortality from croup, scarlet fever, typhoid fever, and cerebro-spinal meningitis; about the same from erysipelas: diminished from the remaining "zymotic" and from pulmonary diseases. Small-pox still is fatal in Montreal.

Sergeant Purssell's meteorological record for the week, in Boston, is as follows:—

Date.	Barom-eter.	Thermom-eter.		Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.			Rainfall. (Melted Snow.)		
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Daily Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration in Hours.	Amount in Inches.
March 16	30.186	30	42	22	61	46	57	54	E	W	N	6	18	8	F	O	C	—	—
" 17	29.980	33	35	25	100	100	100	100	E	W	O	20	4	0	S	R	R	17	.42
" 18	30.094	28	35	21	74	51	78	67	NW	NW	N	10	14	4	F	R	C	—	.05
" 19	30.194	28	39	17	77	38	54	56	NW	NW	W	6	8	8	C	C	C	—	—
" 20	30.207	35	43	23	69	33	79	60	SW	SW	N	12	17	8	F	F	C	—	—
" 21	30.073	34	36	24	100	100	90	96	SE	N	W	11	8	8	S	R	F	11.8	.17
" 22	30.211	31	35	26	66	61	95	74	NW	E	E	4	12	15	C	F	S	65	.33

Weekly Summary.	Barometer.	Thermometer.	Humidity, Saturation being 100.	Wind.	Rain.
	Mean 30.121	Mean 31.7	Mean 60	Total miles traveled, 1636.	Total amt. 0.97 in.
	Max. 30.404	Max. 43	Max. 100		
	Min. 29.714	Min. 21	Min. 33	Prevailing direction, W.	Duration, 35 hrs. 25 min.
	Range .690	Range 22	Range 67		

Barometer corrected for temperature, elevation, and instrumental error.

Explanation of weather symbols: O, cloudy; C, clear; F., fair; G., fog; H., hazy; R., rain; S., snow or sleet; L. S., light snow; T., threatening.

Station: Latitude 42° 21'; longitude 71° 4'; height of instrument above the sea, 77.5.

For the week ending March 1st, in 149 German cities and towns, with a population estimated at 7,571,574, the death-rate was 28.1, an increase of 0.4 from the previous week, due chiefly to greater mortality among infants. Scarlet fever, measles, diphtheria, and pulmonary diseases were less fatal. Typhus fever of a mild form is becoming more prevalent, diarrhoeal diseases much more fatal. Four thousand and ninety-three deaths were reported: 590 from consumption, 506 from acute diseases of the respiratory organs, 198 from diarrhoeal diseases, 161 from diphtheria and croup, 63 from whooping-cough, 62 from scarlet fever, 61 from typhoid fever, 28 from measles, 25 from puerperal fever, four from typhus fever, one

from small-pox (in Beuthen). The death-rates ranged from 17.5 in Darmstadt to 45.1 in Duisburg; Dantzie 28.6; Kiel 28.5; Breslau 28.3; Munich 33.9; Dresden 30.3; Cassel 19.3; Erfurt 25.1; Berlin 25.7; Leipsic 27.1; Hamburg, 26.6; Hanover 25.8; Bremen 25.5; Cologne 28.6; Frankfort-on-the-Main 23.0; Wiesbaden 17.7; Metz 20.4.

For the week ending March 8th, in the 20 English cities, having an estimated population of 7,269,976, the death-rate was 29.1, an increase of 2.5 from the previous week: in London 29.2; Portsmouth 24.5; Plymouth 19.0; Birmingham 21.5; Leicester 36.5; Liverpool 30.1; Manchester 32.9; Leeds 31.1; Oldham 42.7. Four thousand one hundred and twenty-two deaths were reported: 681 from diseases of the respiratory organs (485 from bronchitis, 125 from pneumonia), 125 from whooping-cough, 96 from scarlet fever, 48 from measles, 42 from fever, 30 from diarrhoeal diseases, 17 from diphtheria, 17 from small-pox (all in London). Scarlet fever is declining somewhat; measles and pulmonary diseases increasing; small-pox about the same; diphtheria less fatal in London, but more so in the other cities. Small-pox is less fatal in Dublin, where the death-rate was 36; Glasgow 21; Edinburgh 19.

Small-pox fell in Vienna and Warsaw, but rose in fatality in Budapesth, Paris, and St. Petersburg; a few deaths were reported in Prague, Geneva, Stockholm, Odessa, and Alexandria.

No new cases of the plague are reported. According to St. Petersburg authorities, there were 421 cases and 357 deaths on the Volga. The extent of the sanitary cordon is diminished, but it remains stringently enforced in parts of the quarantined district. It now is evident, however, that many persons escaped through the military lines, and Professor Botkin states his opinion that cases of the plague have occurred in other parts of Russia.

APPOINTMENT. — Dr. Edward Cowles has been appointed superintendent of the McLean Asylum at Somerville, to fill the place vacated by Dr. Jelly's resignation.

DIED, suddenly, at six A. M., February 20, 1879, in Medway, Mass., Dr. Alexander LeBaron Monroe, of chronic valvular disease of the heart, in his seventy-second year.

BOOKS AND PAMPHLETS RECEIVED. — A Treatise on the Diseases of Infancy and Childhood. By J. Lewis Smith, M. D., Clinical Professor of Diseases of Children in Bellevue Hospital Medical College, etc. Fourth Edition, thoroughly revised. With Illustrations. Philadelphia: Henry C. Lea. 1879.

On Deafness, Giddiness, and Noises in the Head. By Edward Woakes, M. D., London. London. H. K. Lewis, 136 Gower St. 1879.

Disease Germs: Their Origin, Nature, and Relation to Wounds. By B. A. Watson, M. D. Jersey City. Extract from the Transactions of the American Medical Association. 1878.

The Nature and Diagnosis of Neurasthenia (Nervous Exhaustion). By George M. Beard, M. D. New York. (Reprint.) D. Appleton & Co. 1879.

The Principles and Practice of Gynecology. By Thomas Addis Emmet, M. D., Surgeon to the Woman's Hospital of the State of New York, etc. One hundred and thirty Illustrations. Philadelphia: Henry C. Lea. 1879.

A Clinical Treatise on Diseases of the Liver. By Dr. Fried. Theod. Frerichs. In three volumes. Vol. I. Translated by Charles Murchison, M. D., F. R. C. P. New York: William Wood & Co. 1879.

Lectures on Practical Surgery. By H. H. Toland, M. D., Professor of Surgery in the University of California. Second Edition. Illustrated. Philadelphia: Lindsay and Blakiston. 1879. (A. Williams & Co.)

Health Primer, No. V. Personal Appearances in Health and Disease. By Sidney Coup, land, M. D. New York: D. Appleton & Co. 1879.

The Diseases of Live Stock, and their most Efficient Remedies. By Lloyd V. Teller, M. D. Philadelphia: D. G. Brinton & Co. 1879.

The Relations of the Medical Profession to the State. By D. B. St. John Roosa, M. D., President of the Medical Society of the State of New York. 1879.

Circular of the Legislative Committee of the Louisiana State Medical Association and of the Board of Health to Physicians throughout the State. New Orleans. 1878.

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BLOOD-CELL COUNTING: A SERIES OF OBSERVATIONS WITH THE HÉMATIMÈTRE OF MM. HAYEM AND NACHET, AND THE HÆMACYTOMETER OF DR. GOWERS.

BY FREDERICK P. HENRY, M. D.,

Physician to the Hospital of the Protestant Episcopal Church, Philadelphia,

AND CHAS. B. NANCREDE, M. D.,

Surgeon to the Hospital of the Protestant Episcopal Church, and Lecturer on the Bones and Joints at the University of Pennsylvania.

VARIOUS instruments have been devised for a more accurate diagnosis of blood diseases than can be made by a mere observation of the symptoms of these affections. Such symptoms are all secondary, and are mostly due to imperfect nutrition of the nervous and muscular systems, imperfect oxidation, and vitiated secretion. In different cases one set of symptoms may be so prominent as to obscure all the others, and in any case symptoms due to a local affection may be confounded with those due to a general blood disease. In many cases nothing but a numeration of the blood cells can even determine the existence of an æmia, and perhaps in no case can any other method distinguish its precise variety.

The instruments used for this purpose are all constructed upon the same principle, the different modifications being such as are designed to facilitate the rapid counting of the cells, and the easy reckoning of their percentage as compared with the standard of health. A known quantity of blood is diluted with a known quantity of fluid, and in a cell of a certain depth and superficies — the latter determined by squares of a certain size ruled upon the eye-piece of the microscope, or on the bottom of the cell containing the blood — the number of corpuscles is counted. With these factors, — the depth of the cell, its superficies, and the amount of the dilution, — the number of corpuscles in a cubic millimetre of blood is readily estimated. It is self-evident that the more the blood is diluted, the easier is the counting of the corpuscles, and the longer the subsequent calculation.

The most recent of these modified instruments is that of Dr. Gowers, of London. The following description of the instrument and its use is

taken from an article by Dr. Gowers in the *Lancet* for December 1, 1877: —

“The hæmacytometer consists of (1) a small pipette, which, when filled to the mark on its stem, holds exactly 995 cubic millimetres. It is furnished with an india-rubber tube and mouth-piece to facilitate filling and emptying. (2.) A capillary tube marked to contain exactly five cubic millimetres, with india-rubber tube for filling, etc. (3.) A small glass jar in which the dilution is made. (4.) A glass stirrer for mixing the blood and solution in the glass jar. (5.) A brass stage plate carrying a glass slip, on which is a cell, one fifth millimetre deep. The bottom of this is divided into one-tenth-millimetre squares. Upon the top of the cell rests the cover glass, which is kept in its place by the pressure of two springs proceeding from the ends of the stage plate. . . .

“The mode of proceeding is extremely simple. Nine hundred and ninety-five cubic millimetres of the solution are placed in the mixing jar; five cubic millimetres of blood are drawn into the capillary tube from a puncture in the finger, and then blown into the solution. The two fluids are well mixed by rotating the stirrer between the thumb and finger, and a small drop of this solution is placed in the centre of the cell, the covering glass gently put upon the cell and secured by the two springs, and the plate placed upon the stage of the microscope. The lens is then focused for the squares. In a few minutes the corpuscles have sunk to the bottom of the cell, and are seen at rest on the squares. The number in ten squares is then counted, and this multiplied by ten thousand gives the number in a cubic millimetre of blood.

“The average of healthy blood was decided by Vierordt and Welcker to be five million per cubic millimetre, and later results agree with this sufficiently nearly to justify the adoption of this number as the standard, it being remembered that in a healthy adult man the number may be a little higher, in a woman a little lower. The number per cubic millimetre is the common mode of stating the corpuscular richness of the blood, but by employing this dilution and squares of this size a much more convenient mode of statement is obtained. Taking five million as the average per cubic millimetre for healthy blood, the average number in two squares of the cell is one hundred. These two squares contain .00002 cubic millimetre of blood, and it is proposed to take this quantity as the ‘hæmic unit.’ The number per hæmic unit, that is, in two squares (ascertained by counting a larger number, ten or twenty, and taking the mean), thus expresses the percentage proportion of the corpuscles to that of health, or, made into a two-place decimal, the proportion which the corpuscular richness of the blood examined bears to healthy blood taken as unity. This is a much more simple method than any hitherto used. The proportion of white corpuscles to the red, or their number per hæmic unit, is best ascertained by observ-

ing the number of squares visible in the field of the microscope, and noting the number of white corpuscles in a series of ten or twenty fields. The number of red corpuscles corresponding to the ten or twenty fields is easily computed, and thus the proportion of white to red is ascertained. The normal *maximum* of white per two squares (hæmic unit) is three."

We each obtained one of these hæmacytometers at about the same time, and, with the object of testing the instruments, began a series of observations upon our own blood, preliminary to a proposed series of observations as to the effect of certain drugs. We soon discovered that the two instruments behaved very differently. Suspicion was first aroused in the following manner: One of us had examined the blood of a hospital patient suffering with intermittent fever, who had been selected for experiment on account of his sallow and anæmic appearance, and the absence of any perceptible enlargement or disease of spleen, liver, or any of the hæmoprietic organs. It was a case in which the results of appropriate treatment would probably be speedily manifested, and especially through an increase of the red blood cells.

The first count was made on October 3d, at 12.30 P. M. Ten squares were counted with the following result: number of red cells per c. mm., 3,420,000; percentage proportion to healthy blood, $68\frac{4}{10}$; number of white cells in the ten squares, seven.

The second count was made on October 7th, and this time twenty squares were counted: number of red cells per c. mm., 2,675,000; percentage proportion to healthy blood, $53\frac{1}{2}$; number of white cells counted in the twenty fields, two.

As the man had had no return of the ague since September 30th, and had improved in strength to such an extent that he was anxious to leave the hospital and return to his occupation, this result very naturally caused considerable astonishment. The care taken to prevent error in manipulation was so great that it was impossible to attribute it to that source. It was very soon ascertained, however, that the cell used at this examination was not the same as at the first observation.

In working together we had, unintentionally, exchanged cells. On October 15th we took the two cells to Mr. Zentmayer, and had them measured. It was then ascertained that there was a difference in depth between the two of $\frac{1}{400}$ inch, the shallower one having been used at the latter of the two observations just referred to.

One cell measured $\frac{5}{800}$ inch deep, the other $\frac{7}{800}$ inch. The cells ought to be $\frac{1}{2}$ millimetre deep, or, taking the millimetre as $\frac{1}{20}$ inch, $\frac{1}{40}$ inch. Neither of them, therefore, was accurate, one being $\frac{1}{160}$ inch deep, the other about $\frac{1}{144}$. The next thing to be done was to determine, by a series of observations, to what extent the results obtained by the two cells varied. Mathematically, they were to each other as five to seven; that

is, there should be between them a difference of forty per cent. In counts of the same blood, made with the two instruments, that is, of diluted blood taken from the mixer at the same time, no such difference of results was ever observed, the utmost variation being eighteen per cent., the least $11\frac{4}{10}$ per cent., the average $14\frac{7}{10}$ per cent. Our experience goes to show that undue importance has been attached to the depth of the cell in these instruments. There are other factors in the calculation of so much greater importance as to cause this one to assume a decidedly subordinate position. These sources of error may be inferred when we come to state the precautions we have taken to avoid them. Suffice it to say here that the effect of gravity upon the blood corpuscles is the same in cells of all depths. In Dr. Keyes's article on Mercury in the Treatment of Syphilis, which was originally published in January, 1876, he remarks that for "accuracy of results the glass cells must be absolutely equal in depth. . . . There is a difference of about $\frac{1}{30}$ millimetre between my cell and one in the possession of Dr. Stimson. There is a uniform difference of about ten per cent. in the count of the same blood in the different cells."

This difference, ten per cent., is exactly what one would expect to find *a priori*, mathematically. After our cells were measured we expected to find, upon mathematical grounds, a difference between them of forty per cent., and suffered about twenty-five per cent. of disappointment. The only explanation of these discrepancies that we would suggest is that, *up to a certain point*, the depth of the cell has a direct and regular influence upon the result; beyond this point, the depth of the cell is a matter of minor consideration. If the cell were *filled* with blood, the depth would always affect the result, but this is never the case; a drop of diluted blood is deposited upon the slide, the glass cover laid upon the drop, with its edges resting upon ground glass to prevent evaporation; the moment the diluted drop is placed upon the slide its contained corpuscles begin to gravitate with great rapidity, and as the drop is generally of nearly uniform size, and as, whether larger or smaller, it rises to the same height above the level of the glass, the depth of the cell can only determine the amount of pressure made by the cover glass upon the liquid; the deeper the cell the less the pressure, and *vice versa*. The corpuscles have, through gravity, a tendency to assume a certain arrangement, which tendency is not to be overcome, but merely interfered with, by pressure from any direction. Of two cells holding a drop of diluted blood, in the deeper the pressure of the cover glass will exert the least influence, and will be directly applied to a layer of fluid containing comparatively few corpuscles, perhaps none whatever. The effect of this pressure is chiefly to spread this clearer stratum of fluid over the corpuscles, and not to deflect these from their perpendicular descent. Our statement that up to a certain

point the varying depth of the cells influences the number of corpuscles in the field, while beyond this point the depth exerts no appreciable influence is, as we have endeavored to show, founded upon correct principles. The undue importance ascribed to the depth of the cell by many observers arises, we think from the fact that they have not constantly borne in mind that they were not dealing with a homogeneous fluid.

In order to estimate the value of blood counting as a method of diagnosis and a guide to therapeutics, we have preserved records of sixty-three counts, thirty-five of these with Gowers's hæmacytometer, the remainder with that of Hayem and Nacet. The counts may be divided into two series: in the first series no particular attention was paid to the cover glass used, one being, at each observation, selected at random from a number that accompanied the instruments. Having found a great variation in the different observations, and with the object of making the conditions of each count identical, a cover glass was selected as free from blemish as possible, and the same side was always applied to the fluid. This was accomplished by marking the side that was kept uppermost, and this mark was invariably placed in the same position. Finally, to insure still greater accuracy, one of us had a cover glass *ground* by Mr. Zentmayer, and this glass was also used with the same precautions. It is unnecessary to dilate upon the importance of using the same cover glass in the same position. All practical microscopists are well acquainted with the flaws and curves of these glasses, and it will be at once conceded that if, in such extremely delicate work as blood counting, at one observation the convex side of a glass be applied to the blood, and at another time the concave side, the discrepancies resulting therefrom may be very great.

When all is told, however, the great source of inaccuracy is in the *measurement* of the blood and the diluting fluid. By counting a great number of squares any inequality in the distribution of the corpuscles may be compensated for to a great extent, but in two successive measurements and counts of the same blood we have found an extreme variation of 790,000 per c. mm. The observations giving this extreme variation were made in rapid succession, and the measurements corroborated by both of us; they appeared absolutely correct in both instances. One result of our observations, therefore, is that no one measurement of blood can be relied upon as trustworthy, no matter how great a number of squares be counted, but that at least two should be made, more if possible, especially if any therapeutic inductions are to be drawn from the facts observed. Keyes has found a difference of two hundred thousand to the c. mm. in different parts of the same field, and we, in double the number of *physiological* counts recorded in his paper, have observed still wider variations; and when to this source of error arising from irregular distribution is added the vastly greater one arising from the measurements, no matter how carefully made, it will at once be

perceived that a difference of five hundred thousand to the c. mm. is by no means a great one. If this difference should happen to be in the direction of excess while the patient is taking a certain drug, the increase is naturally attributed to the medicine, and *vice versa*. Again, we repeat that averages both of counts and measurements, but especially of the latter, are absolutely necessary in order even to approach an accurate result. A single measurement, with a count of five, ten, or twenty squares, we consider almost worthless. Its sole value consists in that it contributes to form an average.

Although our observations were made with the view of testing the accuracy of the instruments employed in blood counting, yet, as they were physiological, neither of us having had a day's sickness since they were begun, they possess a certain value for determining the normal number of red cells per millimetre. This is variously stated by authors. Vierordt, the first worker in this field, whose method was very uncertain, consisting in spreading blood diluted with a gummy solution upon a slide, allowing it to dry, and then counting the cells by means of a micrometer placed directly upon it, gives the number for his own blood as 5,174,000; Welcker states it for himself as 4,600,000; Cramer as 4,726,000; and Malassez indicates 4,000,000 as the average of the blood of man. Gowers adopts a standard of 5,000,000, but states that "in a healthy adult man the number may be a little higher, in a woman a little lower." Keyes thinks the standard of 5,000,000 rather high. We, on the contrary, have found it too low. For one of us, the average of twenty-one counts gives 5,566,272.5; for the other, twenty-six counts give an average of 5,935,862.5, the difference seeming to depend upon weight and size. That the number given by Malassez is absurdly low is presumptively proved by the following facts. In the *Gazette hebdomadaire* for May 7, 1875, is the report of a lecture on blood counting by M. Hayem, which, besides containing an excellent short bibliographical *résumé* of the subject, gives the report of a case of a profoundly anæmic individual suffering with malarial cachexia and gangrene of the mouth, whose blood contained 3,312,500 red globules per c. mm. If the blood of a person in such a condition contained more than 3,000,000 cells to the c. mm., the number of 4,000,000 is certainly too low a standard for health. In the same lecture M. Hayem remarks that he has never, even in extreme anæmia, found less than 3,000,000 cells per millimetre, although in a foot-note he adds that since the lecture was delivered his assistant, M. Dupérieré, had found in two hospital patients in his service "a number of globules somewhat less than 3,000,000." What, then, are we to think of an examination giving as its result 1,000,000 to the c. mm.? We cannot but regard such a condition of aglobulia as incompatible with life.

The next five counts have been placed in a separate series, on account of the manner in which the blood was taken from the finger.

		1	2	3	4	5	6	7	8	9	10			
B's blood.	4.00 P. M.	62	64	50	58	53	55	54	62	59	49	Same day.	5,660,000	Instrument A. { Same 'dilu- tion in both cases.
	4.00 P. M.	48	67	58	67	72	60	64	70	62	67		6,350,000	
A's blood.	5.00 P. M.	49	55	63	55	51	61	55	55	46	46	Same day.	5,360,000	Instrument A.
	5.00 P. M.	56	59	58	56	58	70	66	56	76	59		6,140,000	Instrument B.
A's blood.	10.30 A. M.	59	48	53	58	52	67	50	57	50	57	Same day.	5,510,000.	Instrument A.
	8.20 P. M.	48	50	59	50	47	45	52	55	55	58		5,190,000.	Instrument A.
	10.15 A. M.	55	63	65	61	60	57	52	49	51	45		5,630,000.	Instrument A.
	10.45 A. M.	59	45	57	64	50	57	53	56	54	55		5,500,000.	Instrument A.
B's blood.	4.15 P. M.	61	46	54	39	51	50	65	55	47	60	Same day.	5,080,000.	Instrument A. { Same dilu- tion used.
	4.15 P. M.	56	58	65	73	55	67	61	52	58	58		5,980,000.	Instrument B.
B's blood.	9.30 A. M.	54	58	63	61	65	48	60	46	54	72		5,810,000.	Instrument B.
B's blood.	9.45 A. M.	68	54	65	49	60	61	59	60	63	54		5,880,000.	Instrument B.
A's blood.	6.00 P. M.	56	46	38	45	53	36	58	59	49	46		4,860,000.	Instrument A. { After loss of night's rest and pro- longed phy- sical exer- cise with little food.
B's blood.	10.30 A. M.	55	53	52	63	64	70	57	63	64	63		6,040,000.	Instrument B.
B's blood.	10.45 A. M.	59	57	50	50	61	65	54	65	56	48		5,650,000.	Instrument B.
B's blood.	10.15 A. M.	70	69	68	59	54	63	54	53	69	59		6,130,000.	Instrument B.
B's blood.	8.00 P. M.	65	65	58	64	63	60	76	62	63	62		6,380,000.	Instrument B.
B's blood.	8.00 P. M.	73	61	63	60	54	56	64	58	57	51		5,970,000.	Instrument B.
B's blood.	4.45 P. M.	61	58	73	67	71	62	73	72	69	66		6,720,000.	Instrument B.
B's blood.	10.15 A. M.	51	54	56	44	46	50	52	42	61	60		5,160,000.	Instrument B.
B's blood.	11.15 A. M.	49	39	47	53	52	42	39	49	57	50		4,770,000.	Instrument B.

Average for A's blood, with both instruments, per cub. mm. 5,433,000.

Average for A's blood, with Instrument A, per cub. mm. 5,354,444.

One count of A's blood, with Instrument B, per cub. mm. 6,140,000.

Average for B's blood, with both instruments, per cub. mm. 5,827,142.

Average for B's blood, with Instrument A, per cub. mm. 5,370,000.

Average for B's blood, with Instrument B, per cub. mm. 5,903,333.

Percentage variation of the two instruments on first trial, 11.4.

Percentage variation of the two instruments on second trial, 13.8.

Percentage variation of the two instruments on third trial, 15.6.

Percentage variation of the two instruments on fourth trial, 18.

Average percentage variation of the two instruments 14.7

NACHET'S INSTRUMENT WITH SELECTED, OR GROUND, COVER GLASS.

	12	15	18	13	19	17	15	12	17	19	12	13	16	11	16	13	238	
Nov. 3,	9	18	11	14	12	16	14	15	17	14	17	15	20	11	13	18	234	
5.30 P. M.	11	12	17	15	16	12	17	15	16	17	11	14	14	13	15	14	262	
A's blood.	18	18	18	19	14	21	23	14	18	16	23	11	12	12	17	16	262	Average per c. mm. 6,080,000.
	16	14	18	12	15	19	15	13	15	18	14	16	17	17	17	17	253	
	17	17	14	18	15	21	15	15	18	13	12	10	16	18	20	14	242	
	24	14	11	20	16	16	12	17	12	17	16	19	19	14	15	14	243	
Nov. 5,	18	16	16	16	16	17	20	14	16	19	16	19	15	19	20	16	256	Average per c. mm. 6,370,000.
10.30 A. M.	16	21	11	15	17	21	15	17	13	16	11	17	14	14	14	14	272	
A's blood.	18	15	13	16	15	15	15	18	20	13	14	12	21	13	20	19	257	
	18	16	12	15	14	16	11	15	12	16	16	14	12	12	12	18	239	
Nov. 5,	16	16	11	17	16	14	14	14	15	14	14	9	15	14	11	15	222	
3.10 P. M.	11	9	15	20	12	16	13	13	15	11	12	11	18	7	10	12	246	Average per c. mm. 5,720,000.
A's blood.	13	15	16	11	15	15	12	14	21	11	18	13	17	20	16	19	249	
	13	13	16	17	15	11	15	16	10	16	15	19	16	10	13	14	238	
	13	13	13	18	14	15	18	16	15	15	19	16	23	16	12	11	252	
Nov. 5,	16	16	20	11	13	16	19	17	22	17	14	20	20	21	17	19	278	
5.30 P. M.	12	18	19	14	17	16	19	19	16	17	17	15	14	13	13	19	249	Average per c. mm. 6,285,000.
B's blood.	17	13	17	18	13	21	14	16	12	16	13	14	12	15	18	14	243	
	16	13	16	16	11	12	21	12	22	11	13	13	13	13	13	15	240	
	14	14	14	21	15	11	12	16	10	11	10	10	15	13	13	19	218	
Nov. 5,	15	15	7	10	15	14	14	11	15	8	16	13	13	15	25	12	228	Average per c. mm. 6,145,000. A trace of blood remained in aperture, making it hardly a fair count.
6 P. M.	16	17	13	13	11	16	11	16	14	12	16	15	14	9	13	12	236	
B's blood.	19	12	20	14	14	7	14	18	12	14	18	18	11	8	18	13	225	
	15	15	22	13	12	18	17	12	12	15	12	18	13	12	15	14	238	
	12	12	12	10	12	18	13	19	16	7	16	16	16	13	14	14	229	
Nov. 6,	10	11	16	10	16	16	15	12	14	15	18	8	12	14	13	15	221	
4.45 P. M.	10	11	14	13	11	13	14	10	15	15	9	21	13	13	8	16	210	Average per c. mm. 5,450,000.
B's blood.	11	11	19	13	14	14	13	19	14	17	19	9	9	14	11	17	212	
	11	12	13	13	11	15	17	14	20	11	14	16	12	18	9	14	221	

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Nov. 6, 5.15 P. M. A's blood.	12	12	16	15	15	15	12	18	12	16	12	14	16	11	17	13	226
	19	11	19	9	14	12	11	16	10	12	15	14	12	14	14	8	201
	14	18	18	13	14	10	18	16	16	14	11	16	14	16	12	15	225
	14	17	15	15	15	17	16	15	9	14	12	12	14	12	19	18	225
	12	14	21	12	20	15	15	18	13	11	20	19	13	12	16	19	241
	18	17	16	14	15	18	20	16	17	17	21	22	16	17	18	17	279
	17	15	10	16	13	16	17	13	15	12	6	16	16	13	12	15	222
Nov. 4, 10.30 A. M. B's blood.	12	22	21	15	12	13	14	12	15	16	16	21	16	15	15	12	247
	21	15	14	16	17	12	18	17	19	17	25	12	15	13	15	19	267
	14	12	19	21	12	15	14	10	18	13	17	17	18	12	12	9	266
	21	17	11	24	20	16	14	15	14	13	14	13	17	13	13	15	259
	16	14	12	14	11	13	16	16	14	21	11	13	16	16	19	9	224
Nov. 4, 5.30 P. M. B's blood.	18	18	16	18	19	16	21	14	17	11	14	11	13	13	15	18	252
	17	13	12	14	19	18	12	15	15	18	22	20	12	11	5	12	241
Details of fifth square missing, but result recorded.																	
	21	12	16	15	15	15	12	18	12	16	12	14	16	11	17	13	256
	10	11	19	9	14	12	11	16	10	12	15	14	12	14	14	8	201
Nov. 6, 5.30 P. M. A's blood.	14	18	18	13	14	10	18	16	16	14	11	16	14	16	12	15	225
	14	17	15	15	15	17	16	15	9	14	12	12	14	12	19	18	225
	12	14	21	12	20	15	15	18	13	11	20	19	13	12	16	19	241
	18	20	19	15	18	14	10	21	16	16	24	18	11	18	11	16	265
	17	20	17	15	9	15	16	21	16	16	16	11	18	14	10	21	256
Nov. 7, 11.30 A. M. B's blood.	12	14	18	17	19	20	24	16	14	12	12	18	22	14	17	14	243
	14	14	16	10	8	7	13	21	17	11	13	9	16	11	16	14	216
	14	13	15	14	17	15	13	24	20	7	12	13	20	17	12	19	245
	14	16	13	13	16	18	12	17	15	16	12	12	11	19	13	15	232
	18	15	10	16	10	18	12	15	14	13	13	9	11	17	13	14	218
Nov. 7, 4.30 P. M. A's blood.	13	9	17	16	12	9	15	10	12	11	16	13	13	13	10	10	199
	14	15	16	11	13	12	15	14	13	12	14	14	15	16	10	11	215
	15	17	16	11	9	9	14	13	14	12	12	15	11	14	11	11	204
	16	13	14	17	24	18	18	20	16	18	16	13	14	15	13	20	265
	15	17	21	16	10	20	20	19	14	12	16	16	13	17	22	14	232
Nov. 7, 5.30 P. M. A's blood.	15	17	11	21	23	18	13	12	14	12	17	9	12	13	15	17	212
	15	16	23	14	19	14	16	14	14	10	13	8	18	10	10	13	227
	13	10	14	18	10	16	17	18	14	18	16	16	15	11	14	17	237
	15	15	16	18	12	7	17	9	10	9	17	17	9	19	19	8	208
	18	19	18	13	14	15	12	14	11	12	17	15	14	14	13	12	231
Nov. 8, 10.45 A. M. A's blood.	14	15	14	17	16	11	16	11	11	12	13	18	16	15	16	14	229
	15	17	11	15	16	15	11	19	11	15	14	16	18	16	19	12	240
	18	11	15	15	18	14	18	15	18	12	21	14	20	11	13	15	248
	11	19	14	20	11	17	14	17	11	17	18	13	18	12	8	20	240
Nov. 12, 12 M. B's blood.	17	11	17	16	11	13	17	13	16	15	15	15	12	13	20	12	233
	9	13	16	12	14	14	11	12	14	10	14	15	17	14	12	17	214
	23	15	16	14	10	18	14	13	12	18	15	16	8	10	13	14	213
	16	15	14	13	18	14	10	12	12	14	12	10	14	12	13	13	212
	10	12	7	17	16	16	11	16	6	16	11	16	10	10	16	11	207
Nov. 12, 1 P. M. A's blood.	14	12	11	10	12	17	15	10	18	13	17	13	12	13	10	15	212
	14	13	11	15	15	8	7	13	11	11	17	14	14	13	9	12	196
	15	14	11	13	16	15	13	15	9	10	14	8	12	10	9	14	198
	18	15	15	16	13	15	14	9	11	11	16	13	13	14	18	15	223
	13	12	18	7	11	14	13	16	13	12	12	8	11	10	8	10	185
Nov. 13, A's blood. Time not recorded.	13	14	13	18	13	11	13	10	7	11	16	16	12	13	5	13	138
	12	13	13	13	11	7	15	10	20	15	12	10	15	15	9	15	212
	12	13	15	18	12	14	16	11	13	14	14	15	15	10	14	9	213
	12	13	15	11	14	16	14	11	15	10	14	15	15	17	13	11	216
	14	16	17	12	17	9	12	17	13	13	9	8	21	12	7	12	209
	14	13	14	20	18	12	13	17	11	13	15	8	18	10	18	12	226
	10	13	14	14	15	12	16	14	14	20	17	15	15	19	13	12	232
	15	17	14	19	13	16	19	17	18	12	18	17	16	11	16	12	256
	14	17	12	14	12	14	18	15	16	12	8	16	11	11	14	13	217
	16	14	10	17	17	13	11	16	15	12	15	11	15	10	13	9	214
Nov. 14, 11.45 A. M. B's blood.	18	15	13	11	11	11	12	13	20	19	16	13	7	15	14	14	232
	19	16	15	13	7	14	15	13	14	19	11	12	9	19	9	12	211
	14	16	8	16	11	17	11	15	12	17	14	10	21	19	7	18	225
	13	18	14	17	12	11	14	16	8	17	12	13	13	16	9	16	228
	18	15	12	13	15	19	19	18	20	20	14	17	12	12	15	11	233
	18	15	12	10	18	10	15	14	12	15	16	16	15	8	15	18	230
Nov. 15, 11 A. M. B's blood.	14	20	18	15	16	20	21	15	14	21	15	8	8	14	12	19	241
	16	20	14	18	18	20	18	11	19	18	17	15	18	19	13	23	277
	17	18	14	18	13	18	11	16	14	14	12	21	12	16	11	14	228
	13	13	18	12	14	21	21	11	12	20	16	13	13	14	16	14	277
	14	15	16	14	21	23	17	15	20	19	12	23	10	17	15	14	277
Dec. 18, 10 A. M. B's blood.	16	17	21	17	21	18	26	15	19	12	16	21	15	15	21	16	241
	14	20	20	15	16	17	13	16	14	19	11	15	14	15	16	16	241
	17	17	18	17	10	20	19	18	16	21	15	19	20	15	15	21	270
	21	16	19	14	18	14	18	14	12	13	13	18	21	16	21	18	270
	20	15	18	15	10	23	23	15	21	17	14	14	18	17	15	17	272
Dec. 18, 11.15 A. M. B's blood.	21	19	11	17	16	15	15	14	20	18	17	12	21	11	17	16	260
	14	19	20	18	16	16	17	11	14	16	14	19	18	17	14	15	244
	11	18	12	15	7	18	14	12	13	19	16	15	13	17	14	15	229
	11	18	14	12	17	13	19	13	19	14	12	20	14	14	12	15	249
	14	18	19	14	19	14	24	15	14	12	11	19	15	15	15	12	245
Dec. 26, 4.50 P. M. B's blood.	17	12	20	14	11	15	14	16	8	16	19	18	15	15	23	12	247
	14	14	19	16	19	14	19	15	17	16	12	14	12	14	13	19	247
	17	13	17	22	15	13	13	16	20	16	14	17	13	19	11	17	244

Average for A's blood (11 counts) per cubic mm. 5,699,545.
 Average for B's blood (12 counts) per cubic mm. 6,044,593.

For two weeks previous to last two counts, had been taking protochloride of iron pills.

SERIES OF COUNTS OF BLOOD OBTAINED WITH EXTREME PRESSURE.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Dec. 26, 5.10 P. M. B's blood.	11	13	17	15	19	11	16	19	21	22	20	20	16	16	17	18	271
	12	13	14	9	15	13	16	14	13	12	11	15	16	18	17	10	223
	14	15	8	16	15	18	8	8	15	14	9	13	16	18	12	16	215
	19	12	12	14	13	8	10	11	11	17	16	14	13	8	15	12	205
	20	21	17	13	12	20	21	13	15	12	18	17	20	13	20	13	205
	14	18	13	14	15	16	12	17	15	14	17	16	20	11	11	17	240
Jan. 2d, 5.10 P. M. B's blood.	13	19	16	14	15	15	16	9	11	16	17	14	16	10	16	12	229
	17	12	17	13	14	16	19	15	18	17	14	14	16	16	15	17	250
	16	16	15	21	14	19	13	18	19	12	14	13	11	6	16	17	240
	15	15	16	13	12	19	18	16	22	9	16	22	12	18	12	10	245
	19	15	17	17	18	22	21	15	17	13	14	16	12	18	15	13	262
Jan. 6, A. M. B's blood.	18	18	16	15	15	10	15	14	14	12	16	19	9	18	20	11	240
	14	15	18	16	10	12	19	16	23	19	13	22	16	17	14	10	259
	16	16	14	13	14	13	18	14	16	11	17	14	20	13	14	18	241
	16	15	15	17	13	14	13	11	15	14	19	14	13	12	13	15	229
	15	18	12	17	12	17	14	19	13	11	15	10	16	8	23	11	231
Jan. 6, 8.30 P. M. B's blood.	16	9	11	15	17	15	22	16	13	18	19	8	14	15	16	15	239
	22	19	12	15	11	16	9	11	9	20	20	9	16	17	17	13	236
	13	14	17	15	10	12	22	14	17	21	12	16	20	12	14	21	250
	16	15	13	20	13	15	18	11	11	14	15	11	14	17	11	11	225
	17	13	12	18	14	18	13	13	9	16	18	9	15	11	14	18	238
Jan. 7, 8 P. M. B's blood.	13	15	13	15	18	15	7	23	11	19	15	11	8	19	16	16	234
	14	13	15	11	13	13	11	19	15	17	11	17	15	11	12	13	220
	22	16	18	17	8	16	13	14	16	15	16	15	15	16	13	11	241
	10	14	14	9	12	14	11	18	16	14	15	17	18	15	16	10	223
Average of the above five counts per c. mm.																	5,941,000.

In the preceding tables we have given the counts in full, in order that those interested in this subject may be able to judge of the widely varying details upon which the averages are founded. In no other way can the clinical value of blood-cell counting be fairly estimated in its application to individual cases, and it is this application alone in which the general medical profession is interested. We would particularly emphasize our opinion that a mere statement of results, to the exclusion of details, is calculated to mislead. In the first Gowers series of counts, those made with unselected cover glass, there are recorded two counts of A's blood, with instrument A, giving an average of 6,640,000 per c. mm. Exception may possibly be taken to this large average as due to inaccurate measurements, although we have every reason to believe the measurements correct, and are inclined to adduce this result as an additional proof of the great importance of a well-selected cover glass, for in all subsequent counts the average of A's blood was inferior to that of B.

In the counts made by Hayem and Næchet's method, the measurements were made with the pipettes belonging to Gowers's instrument, and as these are of different dimensions from those that usually accompany the instrument of Hayem and Næchet, giving a more concentrated mixture of cells, a different calculation had of course also to be used. We follow Keyes's statement of the calculation as far as concerns the factors of the cell and eye-piece: "The glass cell on the slide is $\frac{1}{2}$ mm. deep. The eye-piece micrometer marks off $\frac{1}{4}$ mm. square; therefore the count of corpuscles must indicate the number contained (in the dilution used) in $\frac{1}{2}$ mm. cube. But $\frac{1}{2}$ mm. cube is $\frac{1}{125}$ of a c. mm.; therefore the number counted must be multiplied by 125." The blood was diluted by adding 199 parts of fluid to 1 of blood (5 c. mm. to 995

c. mm.) ; therefore the product above obtained must be again multiplied by 200 to get the number of cells in a c. mm. of pure blood, but instead of multiplying twice, a single multiplication of 125×200 , 25,000, will give the same result. This is a much easier calculation than the one necessitated by the pipettes that ordinarily accompany the instrument of Hayem and Næchet. Our Hayem and Næchet cell was made by Mr. Zentmayer, and the eye-piece ruled by the same well-known instrument maker. The Gowers instruments were made by Mr. Hawksley, 300 Oxford St., London. The fluid used to dilute the blood was Keyes's borax solution, and was found to answer admirably.

We cannot perceive any advantage in Gowers's instrument over that of Hayem and Næchet beyond the facility it affords for reckoning percentages, and this, we think, is more than counterbalanced by the superior ease with which counts are made in the smaller squares of Hayem and Næchet. One is enabled, by the latter instrument, to count a greater number of squares with less fatigue in the same time, and the importance of counting a great number of corpuscles has been sufficiently dwelt upon. Although Dr. Gowers claims that his instrument can be used to reckon the percentage of white corpuscles as well as that of the red, our experience inclines us to agree with Dr. Jos. G. Richardson¹ that the tendency of the white cells to adhere to the inner surface of capillary tubes will "lead to incorrect estimates of the proportion" existing between them and the red.

In conclusion we would reply to a question that will arise in the minds of all readers of this paper: "Can accuracy be reached with the present blood-cell counting instruments?" Our answer is: "Yes, but through an amount of labor of which, so far, we have seen no detailed account."

A CASE OF CHRONIC CATARRHAL PNEUMONIA, WITH ANEURISM OF THE SUBCLAVIAN ARTERY, CHRONIC PAR-ENCHYMATOUS NEPHRITIS, AND PAROXYSMAL HÆMATINURIA²

BY J. J. MINOT, M. D.

THE patient, who is forty-eight years old, was in years past a strong and healthy man. In 1861 he entered the army, and from this time date his various troubles. As a common soldier he was exposed to all sorts of hardships, with bad weather, bad country, and forced marches. He had a chronic diarrhœa in 1862, which lasted for three months. At the same time his urinary symptoms first made their appearance, he being unable then to retain his water for more than one half hour.

¹ New York Medical Record, March 2, 1878.

² Read May 16, 1877, at a clinical conference of the third class of the Harvard Medical School, the author then being a member of that class.

His legs and feet were considerably swollen, and have been so to some extent several times since. He is unable to give any account of the appearance of his urine at that time. He states that he now passes, and has ever since this trouble passed, his water rather too often, but not a great amount at any one time. In consequence, he says, of his diarrhœa he became very much debilitated, lost much flesh and strength, and was extremely pale. His voice was hoarse and weak; he was very nervous and easily excited. He was then, in 1862, discharged from the army for disability. In 1864 he again enlisted, being quite well, but not as strong as he previously was. Here also he was exposed to wet and the influences of malarial poison, many men in his regiment having chills and fever. He had then rheumatism in his various joints, and occasionally has slight attacks of it now. At about that time, after exposure to cold and wet, he had what he called "a dumb chill," which was followed at his next micturition by what he spoke of as "bloody urine," and this symptom lasted for several micturitions, and then disappeared as quickly as it came. Since then he has been subject to these attacks as follows: They come on, for the most part, with no regularity as to time, but occur after exposure to cold or wet. He first feels weak and languid, his extremities are chilly, he gapes and stretches a good deal, and soon this is followed by a chill, not quite so distinct, perhaps, as to be called a rigor. The chill lasts for a short time, and is usually *not* succeeded by a sweating stage, the feet and hands particularly remaining cold for some time after. He loses his appetite entirely, feels very weak and thirsty, and complains of pain in the back and elsewhere, with sometimes a feeling of numbness and cramps in the extremities, and occasionally some nausea. The first urine passed after a chill is described as being of the color of porter, the depth of the color varying with the severity of the chill; not much in amount, and containing a very large sediment. His urine remains of this color for several subsequent acts of micturition, which are rather frequent, when it resumes its normal appearance. His appetite and strength slowly return. He is always sleepy after one of these attacks, and if he can go to bed he goes readily to sleep, and may sometimes then have a sweating stage. After waking up he feels comparatively well. He has to wear two pairs of stockings to keep his feet warm, and the other clothes in proportion. He thinks he has been jaundiced several times, and his face now is rather sallow. The attacks occur usually soon after getting up in the morning. He has never had one in bed. Once or twice they have come on with a true intermittency for several days in succession. He is more subject to them in spring than at other times of the year, seldom having them in summer.

About 1861, and some time previous to the first of these attacks, he noticed a cough, which he has had ever since. At that time he had

two or three attacks of hæmoptysis, and has had one within a year. His cough troubles him, especially in the morning. He describes the expectoration as yellowish, rather thick, at times copious and tinged with blood. He complains of shortness of breath on much exertion, and of some pain in the chest, particularly the right side. He catches cold very easily, and may then become hoarse. There is no trouble with the eyes, except that he cannot read as readily as he used to, but this is entirely relieved by the use of glasses. He had a bubo twenty-five years ago, but no symptoms of syphilis since. There has been no return of diarrhœa since 1862. He has had nothing that could be called true and regularly intermitting chills and fever, unless possibly at those times when his attacks of dark urine came on several days in succession, with some regularity as to the hour. The patient states that he has several times been entirely "used up," being very pale and weak, though now he feels comparatively well. His appetite is good, and his digestive system in a fair condition.

Considering the symptoms in the order in which they occurred, we come first to his urinary trouble in 1862, with great frequency of micturition, œdema of the legs, and a persistency, to some extent, of these symptoms to the present time. From this we are led to suppose an acute nephritis or acute cystitis, which has now become chronic. But the examination of the urine settles it.

Next in order come the pulmonary symptoms, — cough, expectoration, hæmoptysis, etc. These would suggest phthisis as the probable, and chronic bronchitis as a possible, cause. Physical examination will show which.

Next are those attacks of dark-colored urine preceded by a chill after exposure, accompanied by certain symptoms, and disappearing after a few hours. Here we must consider the possible causes giving rise to blood or the appearance of blood in the urine. We have (1.) Traumatic injuries (2.) Renal affections: congestion, acute nephritis, suppurative nephritis, cancer, tubercle, parasitic diseases, renal embolism, minute calculi in the tubules, hydatids. (3.) Affections of the pelvis and ureters. (4.) Affection of the bladder: congestion, acute cystitis, cancer. (5.) Gonorrhœa and urethral inflammation. (6.) Endemic disease. This occurs only in hot countries, and may be reasonably thrown out. (7.) Abnormal condition of the blood: purpura, scurvy, etc. (8.) Intermittent or paroxysmal hæmaturia, hæmatinuria, or hæmoglobinuria. The vesical and urethral causes may be dismissed, for in these the blood and urine are not intimately mixed, as they would seem to be here. In most of these the dark color of the urine is due to the presence of blood as such, while in the paroxysmal hæmatinuria, and very rarely in septic and malignant fevers, purpura, and scurvy, and after poisoning by arseniureted hydrogen or carbonic anhydride, this is not the case. Obviously, then, an examination of the urine will

enable us to decide which of these series we are to consider. We will wait, therefore, and proceed to the physical examination, and we will begin with the chest.

On inspection we find a good-sized chest, with a prominence about the sternal end of the third and fourth ribs on the left side, which he states he has always had. There is no visible pulsation in the region of the heart. But above and to the right of the supra-sternal notch a roundish pulsating body can be seen, of the size of a hen's egg. The pulsations are transmitted diagonally across the neck in the direction of the course of the transversalis colli artery, and to some extent into the carotids. The subclavian artery can be seen to pulsate in the pectoral triangle on that side. The patient stated that he had never observed this swelling before it was pointed out to him.

On palpation the apex of the heart was found to be below the normal point, but to the inside of the linea mammalis. No abnormal sensation, as a thrill, could be detected over the above swelling, or anywhere else over the chest. The impulse of the heart was rather slight. The right brachial pulse as compared with the left was weak, and the difference between the right radial and left radial was considerable, the right being the weaker. The difference between the right and left carotid and right and left temporals was slight. The impulse in the above swelling was found to be synchronous with that of the heart, and by grasping and compressing the swelling between the fingers, it could be seen and felt to expand at each systole of the heart. It was found to be quite immovable, and could not be slid about under or with the skin. On percussion dullness was found on the right side of the chest in front, from the apex to about the fourth rib. There was less dullness on the left side; it did not extend so low down. The dullness in the præcordial region was about normal. There was deficient resonance towards the top of the back and on both sides, but no circumscribed spot of dullness in the vicinity of the above-mentioned swelling. On auscultation a large number of high, fine, moist râles were heard over the region of dullness on both sides, back and front, on inspiration and cough, as well as coarse râles in the same region. No abnormal sounds were heard over the heart above this tumor in the neck, though the sounds of the heart, especially the first, were well transmitted to the ear over it. No abnormal sounds over any of the large arteries or veins were detected.

Taking, first, such of these signs as belong to the lung, — dullness, high, moist râles towards the apex, — together with the history, we reach a diagnosis of phthisis pulmonalis, chronic catarrhal pneumonia. From the rest of these signs we conclude that there is no valvular cardiac lesion that can be made out. We find, however, the apex beat somewhat lowered, which may be due to hypertrophy of the left ventricle, an explanation for which, if present, will be discovered further on.

Coming now to the tumor and the signs connected with it, we found that there was a pulsating tumor at or near the point of departure of the carotid and subclavian arteries on the right side, with the pulsations transmitted in the direction of the arteries arising near this point, with a distinct expansibility and not a mere pulsation, with a difference between the radial pulses of the two sides and some slight difference between the two carotids and their branches, but with no thrill nor murmur, the sounds of the heart, however, being distinctly heard over it. A sphygmographic tracing of the pulses of the two sides, as taken by Dr. Whittier, showed the right to be weaker than the left. These signs would immediately suggest aneurism as their most probable cause. But it must be remembered that a solid or fluctuating tumor might exist in the same situation, and give rise to many of the same physical signs. If there were any marked symptom or history connected with the tumor, it might aid us in the diagnosis. But the perfectly distinct expansibility, its immovability, the difference of the pulses of the two sides, the transmission of the cardiac sounds over it, together with the patient's previous occupation, would justify our making aneurism the diagnosis. Having settled on aneurism as the trouble, we have still to find the seat of it. From the sphygmographic tracing it is evident that the arch of the aorta cannot probably be involved, for in that case the two pulses would be more alike in intensity. It must then be in the innominate or some more distal artery. From the absence of marked symptoms connected with it, of any bulging of the ribs, and of dullness in that region, and from the carotids being but little affected, I think it can be safely said that it does not involve the innominate, at least to any extent. The actual situation of the swelling as seen by the eye is that where the subclavian and carotid leave the innominate, and it is more over the subclavian than the carotid. The signs produced by it, difference of pulse, etc., are much more marked in the branches of the subclavian than of the carotid. I would place it, then, on the subclavian, near its origin, and perhaps involving the carotid or innominate more or less.

We next turn our attention to the urinary troubles, and remembering the acute attack of some such disorder in 1862, with a persistence of the symptoms to some extent, we will examine his urine as it is under ordinary circumstances, and find the analysis to be as follows: color rather high; specific gravity 1023; reaction acid; urophane normal; indican normal; uric acid slightly increased; urea diminished; earthy phosphates diminished; albumen one fourth per cent. The sediment, which was considerable, contained many mucous casts, fatty casts and some fat globules, finely granular and a few hyaline casts, renal and bladder epithelium, a few oxalate of lime crystals, and granular *débris*.

Here we see at once that we have some chronic disease of the kid-

ney, and the examination of the urine would point to, while the history would not disagree with, chronic parenchymatous nephritis with fatty degeneration. The increase rather than a decrease of the amount of urine passed in the twenty-four hours, the comparative absence of œdema, and the age of the patient would lead us to suspect that there was chronic interstitial nephritis. But ordinarily a pure case of either form is rare, so we may suppose some interstitial inflammation, too. But the urine, which is here the most important factor in the diagnosis, is that of chronic parenchymatous nephritis. In this we have a cause for the hypertrophy of the left ventricle as spoken of above. Whether the trouble with the eyes is a result of the nephritis can be settled only by an examination of the fundus of the eyes. Such an examination I have not made, but against such a view is the fact that this trouble is relieved by glasses; and although some authorities would ascribe both myopia and presbyopia to Bright's disease, most writers describe the ocular affection as a general increasing dimness and haziness of vision, which the use of glasses cannot correct.

We come now to the most interesting group of symptoms: the intermittent attacks of dark-colored urine, preceded by a chill, and for the most part only after exposure, accompanied by lassitude, yawning, stretching, general weakness, anorexia, pain in the back and elsewhere, sleepiness, and occasionally cramps, numbness, and nausea, with a persistence of cold extremities, rarely followed by a sweating stage, and then only after being warmly covered up, an almost complete remission in a few hours, with a return to the normal condition.

Since this man has been under my observation he has had but one of these attacks, and that was a slight one, neither the color of the urine being as dark nor the amount of sediment as great, he stated, as it usually was. I had three specimens, passed at ten A. M., two P. M., and five P. M., respectively, the chill being at nine A. M. After this the urine was normal in appearance again. The color of the first was that of rather light claret, of the second darker, and of the third considerably lighter. The specific gravity of the first was 1023, of the second 1025, of the third 1022. The amount of sediment in the first was considerable, in the second more, in the third less. The chemical examination was about the same, and as follows: urophæine and indican increased; earthy phosphates and chlorides diminished; albumen one half of one per cent.; no bile and no sugar. The sediment contained granular, hyaline, fatty, and mucous casts, renal and bladder epithelium, very few small oxalate of lime crystals, much granular *débris* of a reddish-brown color, and no blood globules.

The absence of blood as such would throw out of consideration all of the affections named above, probably, except the intermittent hæmaturia, and those cases in which this symptom occurs in septic and

malignant fevers, purpura, scurvy, poisoning by arseniureted hydrogen and carbonic anhydride. With the description of the cases I have been able to find of intermittent hæmatinuria, the history and the examination of the urine of the patient agree in all the important particulars. In all of these cases the attacks came on after exposure to cold or wet. In most the subsequent attacks occurred only after a fresh exposure. The rational symptoms attending these, as described, are those in this case. As I have never had an opportunity of seeing this man during one of his attacks, I cannot say what there is to be found on physical examination, but in the cases mentioned it is as follows: the temperature falls below normal; the pulse is slow, the body cold, the skin sometimes jaundiced, the spleen occasionally enlarged. The temperature and pulse slowly rise to their normal points, rarely going above them, and remain there until the next attack. But after all, the hæmatinuria can be considered only as a symptom, and not as a disease. The true trouble, then, is yet to be sought, and here pathologists are very much divided, nearly every one who has reported cases having a view of his own. In the first place, it might be considered as due to progressive pernicious anæmia. It will be remembered that in a case read here last fall by Mr. Bancroft there were many symptoms similar to those here described, and that then the diagnosis reached was progressive pernicious anæmia. In that case, according to the analysis of the urine, there were but few blood corpuscles detected, and those only once. Many of the symptoms were similar to those here, — the paroxysmal character of the dark urine and the general feeling of weakness, etc. There were not, I think, well-marked chills. It is known that hæmorrhages do occur in progressive pernicious anæmia. But whether they may occur, as here, without the appearance of the blood globules, as such, I have been unable to find out. However, an examination of the blood in this case, as made by Dr. E. G. Cutler, showed that there was but the slightest degree of anæmia present, with no alteration either in size or appearance of the blood globules, and no protoplasmic corpuscles present. Progressive pernicious anæmia, then, may be dismissed as a cause in this case. In that case, as in ours, there was nephritis besides the anæmia. The question arises, Could nephritis give rise to the solution of the blood globules and the setting free of its coloring matter? The experiments of Magendie show that water injected into the blood does cause a dissolution of the corpuscles. But Professor Lebert states that he has never seen this occur with any dropsical or hydræmic condition in man. Again, Naunyn¹ has shown that if a large amount of blood pigment is at once set free, part of it may pass out unchanged through the kidneys. Von Dusch has stated that the effect of biliary acid in large amounts on the blood consists in the dissolution of the

¹ *Archiv fur Anat., etc.*, 1868, 4 Heft.

blood corpuscles, and, further, that the action of the biliary acids on the muscular and nervous systems produces a slow pulse, a low temperature, reduced respiration, languor, debility, and easy fatigue, and in severer cases stupor, coma, etc.

These facts, together with the occasional presence of jaundice during the paroxysms of hæmatinuria, have led to the belief that there was some trouble with the liver, but none such has been found on post-mortem examination.

In some of the cases reported by Dr. Begbie, W. Roberts, Druitt, and others, the patients had had chills and fever, while others had been exposed to malarial poison, but in still others no such exposure could be found. On this ground, and on account of the periodicity of the attacks and their having yielded to quinia, the theory was propounded that this was but one of the many manifestations of malarial poison. This would seem to be the opinion of many, and especially, perhaps, of the earlier reporters. Dr. Brunton, in the summary of a case reported to the Royal Medical and Chirurgical Society, states that Lussana has shown the seat of malarial poison to be in the portal circulation; that whenever it escapes into the general circulation an ague fit occurs; and that the phenomena of ague are due to a contraction of the cutaneous blood-vessels, with a congestion of the internal organs, and so the renal vessels being supposed to offer the least resistance the blood escapes there. But these attacks are not directly periodic, but require a fresh exposure each time, and the temperature is below, not above, the normal point. The malarial origin is denied by many, among whom are Greenhow,¹ Begbie,² Pavy,³ Murchison, and Thudichum.⁴ Greenhow thinks it is due to some dyscrasia on which the blood acts as the immediate exciting cause; he places much force on the presence of oxalate of lime crystals in the urine, which he found to be constant in his cases, though others have failed to find them and state that they are of no consequence. All of his patients had had rheumatism, and this is thought to have had something to do with it. Dr. Begbie, though he admits the possibility of a malarial poison, states that the kidneys must be interfered with before so much stuff can pass away through them. He says that the idea that the coloring matter of the blood is changed into the pigment of urine in the kidneys is quite untenable, and moreover there is often jaundice present in these cases, which can be easily explained, if we are seeking for the causation of the disease in the breaking down of the blood corpuscles, whether in the liver or elsewhere. Although the conditions necessary for such a change to take place are not certain, however produced, the broken-down corpuscles may be

¹ Edinburgh Medical Journal, 1868.

² Medical Times and Gazette, 1875.

³ British Medical Journal, 1871.

⁴ Reporting officer of the Privy Council.

driven round the body, and so jaundice may occur, and the passage of blood pigment by the kidneys follow. Certain forms of jaundice would seem to show that mental or nervous influences can effect such a change, and this same theory will extend to the origin of paroxysmal hæmaturia. Bristowe states that there is no structural lesion of the kidney. The phenomena, he says, are due probably to an influence transmitted from the skin to the vaso-motor nerves of the kidney, and thus the small vessels are stimulated to a temporary condition of active dilatation. Finally, Drutt¹ sums up his case as follows: Is it a neurosis? a disturbance of the blood vessels caused by a worn-out nervous system? or is it hæmolysis, a decomposition or necrosis of the blood corpuscles? He thinks both, though he cannot assign the proper value to each. That the brain is involved he thinks is clear, from the fact that over-exertion of the brain and nervous system can bring on an attack. It is equally undeniable, he says, that unnatural changes are going on in the blood, of which a dusky complexion is an early sign that the blood corpuscles are unstable and breaking down into bile and lithates (the latter being found in some cases), whence the occasional jaundice and urinary deposit; also, that probably, at other times, the quantity of blood globules destroyed is too great to be oxidized into bile and urine stuff, so that then they are excreted bodily by the kidneys. But how they escape he cannot explain; probably the nerves and altered blood both concur in effecting a sudden stagnation of the circulation, paralysis of the capillaries, and disintegration of the blood corpuscles. The effects of quinia and the periodicity may, he thinks, be considered an evidence of a malarial character.

So we see that the true nature of the disease, of which the apparent affection is a symptom, is still undecided, and consequently, in default of a better name, the disease goes by the name of its symptom, paroxysmal hæmoglobinuria.

We have arrived, then, at a diagnosis of the troubles which our patient has: chronic catarrhal pneumonia, aneurism of the subclavian artery, chronic parenchymatous nephritis and paroxysmal hæmoglobinuria.

Prognosis. — For the phthisis the usual unfavorable one is to be given. That of the aneurism is probably unfavorable, most cases of thoracic aneurism ending fatally sooner or later. The usual eventually unfavorable prognosis is to be given for the nephritis, and for the hæmoglobinuria the prognosis as regards life is favorable, but for a permanent cure probably it is not so.

Treatment. For the phthisis the ordinary measures for relief from this disease are to be used. For the aneurism the treatment is various, the object being to obtain an obliteration of the sac either by slowing

¹ *Medical Times and Gazette*, 1875.

the blood current, by producing irregularities of the inner surface, and so coagulating by causing inflammation and obliteration of the sac, or by completely shutting off the blood from the aneurism either permanently or temporarily. With these ideas in view many things have been tried: First, tying the artery on the proximal side of the aneurism (this of course cannot be done here). Second, tying the artery or its branches on the distal side; here by tying the carotid and subclavian simultaneously. Third, by digital pressure, kept up for a long enough time to secure coagulation of the blood in the sac. Fourth, by trying to cause a contraction of the walls of the sac by injecting ergot, etc. Fifth, by causing coagulation by chemical means, as the injection of the salts of iron, etc. Sixth, by passing a galvanic current through the aneurism. Seventh, by the internal administration of drugs, as the iodide of potassium. And, finally, the cure may be spontaneous. Most of these methods have not given very encouraging results, except perhaps the tying of the artery.

For the nephritis, the health and strength should be kept up, exposure avoided, and the symptoms treated as they arise.

For the paroxysmal hæmoglobinuria, the great thing is prophylaxis by warmth, exercise, warm baths, mustard baths, warm clothes, a warm and unchangeable climate, the avoidance of cold and wet, and particularly of draught. As for drugs, quinia in large doses is the only one that seems to have had any real effect, though nearly everything has been tried. Iron may be necessary for the anæmia, and in general the strength and good condition of the body are to be improved by every means.

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RECENT PROGRESS IN URINARY SURGERY.

BY T. B. CURTIS, M. D.

Rapid Lithotripsy. — Our readers are familiar with the new operation for stone in the bladder, devised by Prof. H. J. Bigelow, and described a year ago in this journal.¹ When the attention of the profession was first called to this procedure the cases adduced in its favor, though showing brilliant results, were too few in number to be conclusively demon-

¹ See the JOURNAL, February 28 and March 7, 1878; also May 2, 1878.

strative of its value. Since that time several surgeons have practiced Dr. Bigelow's operation, and both the results obtained and the opinions expressed by them appear very favorable to the new method.

One of the first to record his experience was Professor Van Buren,¹ of New York, who, on the strength of six successful cases, speaks as follows: "Personally I feel much confidence that Professor Bigelow's novel proposition that lithotrity may be safely accomplished in one sitting will be successfully demonstrated, and that his discovery of the hitherto unrecognized tolerance of the bladder — for it is certainly to be regarded as a discovery in the full sense of the term — will by its great practical value modify the future of lithotrity."

Dr. H. B. Sands,² of New York, has published a successful case, in which an operation lasting one hour and ten minutes, practiced upon a patient sixty-nine years of age, was followed by no bad symptoms, and resulted in recovery.

Dr. E. L. Keyes³ recently exhibited to the New York Pathological Society four calculi which he had crushed and removed in one operation by Dr. Bigelow's method, bringing the number of cases so treated by him up to thirteen. The first of the four stones weighed two drachms, and was removed in forty-five minutes. The second weighed six drachms, and was removed in an hour and two minutes; at the end of one week the patient went out to walk. In the third case the stone weighed six drachms; the operation lasted thirty-five minutes. In the fourth case the size of the stone was not stated; the operation lasted thirty minutes. In the course of his remarks upon these cases, Dr. Keyes said that "he had now performed thirteen operations by Bigelow's method, and it seemed to him that each additional operation, each increase of experience in its performance, was an argument in favor of the method. He had not had a fatal case, and believed that Bigelow's method would be the one which would supersede all others for the removal of vesical calculi."

Sir Henry Thompson, who is universally recognized as the leading authority on the subject of lithotrity, has long been the advocate of a method which is the opposite of that now proposed. He has hitherto practiced and advised multiple sittings of very short duration. In the last edition of his clinical lectures⁴ he spoke as follows: "The mere sojourn of the instrument in the bladder is a source of irritation precisely corresponding to the time, within certain limits, it continues there." He adds: "It has therefore been an object with me to lessen as much as possible the number of instruments employed, the amount of manipulation applied to them, and the time devoted to this process." An ed-

¹ New York Medical Record, September 28, 1878, page 241.

² New York Medical Record, January 25, 1879.

³ New York Medical Record, March 15, 1879.

⁴ Lectures on Diseases of the Urinary Organs, London, 1876, pages 172, 174.

itorial article in the *Lancet*,¹ contrasting his method with that of Dr. Bigelow, says: "Lithotripsy as hitherto practiced by him and lithotripsy as recommended and performed by Professor Bigelow are different operations, and based on opposite and contradictory principles."

Quite recently, however, he has published a lecture on Lithotripsy at one or more Sitzings, in which the opinions and practice recorded are such as, in the words of the editor of the *Lancet*, "involve the abandonment of his old position." He therein shows himself to be favorably inclined, within certain limits, towards the new method, and records a case in which gratifying results were obtained by means of lithotripsy and evacuation combined, and terminated in a single operation. He cannot, however, as yet be said to have fully tested the capabilities of the new method; for, although he, in common with all lithotritists, has often accomplished the removal of small stones in one operation, with or without the assistance of an evacuating apparatus, he has recorded but one case where the size of the stone broken and removed in a single sitting was sufficient to entitle the operation to be classed with those of Dr. Bigelow. In this very recent case the stone weighed two drachms, and was therefore large enough to have required several sittings by the old method, though far below the size of some of the stones successfully removed in one sitting by other operators.

This stone, weighing two drachms, was removed in eight minutes, and inasmuch as the evacuating apparatus used was defective in some of the particulars considered most important by Dr. Bigelow, the rapidity with which the stone was removed testifies to the exceptional skill of the operator. It has, however, been noticed in this country that a considerable part of the time occupied by the operation is consumed in verifying its completion. Experience has shown repeatedly that although as much as two drachms of calculus may easily be evacuated in as short a time as eight minutes, somewhat more time is required to allow the operator to make sure that he has fully accomplished his undertaking, and to ascertain that no fragment remains in the bladder to act as an irritant, or to form a nucleus for further deposit.

Instead of trying the perfected apparatus devised by Dr. Bigelow, Sir Henry Thompson has preferred to use Clover's original instrument, slightly modified, as he says, by himself, with evacuating catheters not exceeding 26 French in calibre, — larger than these being "mostly dangerous and wholly unnecessary." Not only is his catheter smaller than that advocated by Dr. Bigelow, but the eye of his instrument, as figured by him, has a calibre considerably smaller than the already inadequate calibre of the catheter itself. The efficiency of the evacuating tube is thus very much diminished. The stone to be dealt with in his case being rather small, the disadvantages of the evacuating apparatus could

¹ The *Lancet*, February 1, 1879, page 143.

hardly make themselves felt. It is to be hoped that Sir Henry Thompson, having taken this first successful step in the direction of litholapaxy, will consent to modify still further the operation and the apparatus to which he has been accustomed, and that he will be induced to try rapid lithotrity with a still larger evacuating tube on a still larger stone.

The foregoing citations show that the new operation devised in this city is rapidly making its way into general acceptance as a safe and speedy cure for a painful and dangerous disorder, and that an amount of experience is now on record which shows that the claims originally put forward in behalf of its security and efficiency were not excessive.

*Phymosis as a Cause of Rupture in Children.*¹ — To phymosis, which occurs so frequently in children and is so often apparently harmless, numerous ill effects have been attributed. Incontinence of urine, fits and various spasmodic affections, masturbation resulting from the irritation caused by retained smegma, balanitis, and, later in life, epithelioma of the penis, have been said to be occasional results of this condition. Professor Sayre has called attention to phymosis as being a cause of paralytic affections of the lower limbs. The first person to observe a connection between phymosis and the occurrence of hernia seems to have been Mr. Owen, who is quoted by Mr. Kempe as saying that "in cases of umbilical and inguinal hernia it is well to look to the size of the urethral and preputial orifices." Mr. Kempe, having noticed the frequent coincidence of phymosis and hernia, was thereby induced to make investigations in the cases occurring in the Children's Hospital, of which he is surgeon. He therefore took fifty cases of phymosis, unselected, and found that in thirty-one there was rupture. In five cases there was double inguinal hernia, and in many umbilical hernia existed in addition, this form not being counted when occurring alone. In no case was the rupture noticed at birth; the earliest was discovered at the age of three weeks, the latest at two years and a half. In all these cases circumcision was performed. In five cases the hernia disappeared entirely, and in all much improvement resulted. "It cannot be unreasonable," says Mr. Kempe, "in the face of these facts, to suppose that a long and tight prepuce may be a cause of rupture in children. The sequel of events is probably as follows: the abdominal parietes are naturally weak in children, which renders them less able to resist impulses which project the viscera against weakened parts. Here, then, is a remote or predisposing cause. The exciting cause is, I think, readily supplied by the frequent and continued efforts that the child makes to overcome the obstruction offered by the tight prepuce, and by the cries uttered consequent on pain caused in making these efforts."

Solution of Quinine as an Injection in Chronic Cystitis. — In a pre-

¹ J. A. Kempe, *The Lancet*, July 27, 1878, page 119.

vious report¹ the use of bactericidal solutions for washing out the bladder in cystitis was spoken of. To the agents then advocated (salicylic acid, borax) quinine must be added as deserving a trial, on the strength of the results obtained from its use by Mr. Nunn in cases of chronic cystitis with decomposition of the urine within the bladder. The following is the method of preparing and of using the solution: "Dissolve twenty grains of disulphate of quinine in twenty-five ounces of water by the aid of a few drops of dilute sulphuric acid or a teaspoonful of common brown vinegar. Of this solution inject into the bladder two or three ounces, and let it remain."

*Treatment of Incontinence of Urine in Children.*²—In this troublesome and often refractory affection there is a very simple means of prevention which occasionally proves successful, and seems therefore worthy of trial. It consists in modifying the diet of the child by diminishing the amount of meat, or by suppressing the use of meat altogether, for a while. The efficacy of this means in obstinate cases is testified to by two observers.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. G. CUTLER, M. D., SECRETARY.

JULY 22, 1878. *Apparatus for Prolapsus of the Rectum.*—DR. C. P. PUTNAM showed a boy who had been troubled with prolapsus of the rectum for three years. He was eight years old, and had but recently come under treatment. The prolapsus occurred only during defecation, and as it seemed probable that the ordinary position assumed during this act might aid in the production of the difficulty, the patient was required to sit on a chair with the feet hanging free at the time of stool. This and other means were tried without avail. Finally a strip of tin was devised to go around the waist, bearing an arm which curved around the sacrum and terminated at the anus in a ring of a size sufficient to allow of free discharge of feces, and yet which kept up the gut when the tapes attached to the ends of the apparatus were tied tightly. The apparatus had been worn for some time at every defecation, and had been effectual in keeping the intestine in place.

Rupture of the Bladder.—DR. C. D. HOMANS reported the case. A man twenty-two years of age, a laborer, was brought into the hospital July 7th partially unconscious. There were bruises on the head, but none on the abdomen. It was learned that twelve hours before he had been pounded by another man who had fallen on him while both were intoxicated, and that he had not passed his water for many hours. Complaint was made of pain over the region of the bladder. A catheter was passed, and a little turbid urine drawn. At night again a small quantity was withdrawn, and morphia was

¹ See the JOURNAL, November 29, 1877, page 620.

² J. McIntyre, *The Lancet*, May 4, 1878, page 665. F. N. Greenwood, *ibid.*, May 25, 1878, page 778.

ordered as occasion required. July 8th sixty ounces of urine were drawn at one time, containing pus and blood. There was pain over the region of the bladder, with tenderness, and symptoms of general peritonitis appeared. July 9th the ordinary amount of urine was drawn off, and it was found to contain blood and pus still. July 10th the patient had to be catheterized, though he passed a little urine himself. He continued to become worse, and finally died at one o'clock that night.

DR. DRAPER, who had made the autopsy, showed the specimen. The peritonæum was covered with false membrane. On the fundus of the bladder externally there was a rent half an inch long extending through the serous and muscular coats. On the inside of the bladder the rent was two inches long, and of a crescentic shape. In the fresh state the muscular coat was covered by a white substance which was apparently a slough. The mucous membrane of the bladder was everywhere injected.

Excision of the Hip. — DR. BRADFORD showed a specimen taken from a patient on whom excision of the hip-joint had been performed a year before by Dr. Langmaid, at the Children's Hospital, for extensive disease. At the time of the operation there was albumen in the urine. The patient died a year after the excision with symptoms of uræmic poisoning. In spite of the unfavorable condition of the patient, the specimen showed the establishment of a new joint at the place of previous excision. The acetabulum had been absorbed: the shaft lay on the dorsum of the ileum, just above the acetabulum, the ileum and shaft were united by a well-formed capsule which was perforated by ulceration, the cavity of the new joint containing pus. The ileum and femur were both extensively affected by inflammation, and were thin and friable. The ileum at places was so soft that a knife could be passed through. In places there was an attempt at the formation of new bone. The kidneys showed amyloid degeneration of the Malpighian bodies and the vessels leading to them.

Myoma of the Stomach. — DR. CUTLER showed the stomach of a patient who had died of heart disease. At the pyloric end of the organ there was a dense polypus the size of a large bean projecting from the anterior wall by a slender pedicle. The terminal end of the polypus rested just within the pyloric orifice. There had been no gastric symptoms during life. A microscopic examination showed the tumor to be composed of unstriped muscular fibre, and a little connective tissue covered by a mucous membrane.

Mucous Polypus of the Colon; Diverticulum of the Ileum. — DR. CUTLER also showed a portion of the ascending colon of a child, from the mucous membrane of which hung a mucous polypus the size of a small cherry. The child was four years old, and had suffered from a severe attack of diarrhoea in infancy. In the same subject a diverticulum from the ileum was discovered about two feet above the caecum; it was the size of a robin's egg, and did not communicate with the gut. A microscopic examination of the fluid it contained revealed granular cells, granular fat, cholesterine plates, and some fatty, degenerated, round epithelium cells.

Epilepsy due to Phymosis and to Irritation from a Tooth. — DR. WILBER reported two cases of epilepsy: (1.) In a boy aged ten there was no known

cause except phymosis. The child would scream in his sleep, and have slight spasmodic paroxysms; as many as four or five attacks occurred daily. Bromide of potassium had been given without effect. He was circumcised at the City Hospital, and the attacks afterwards increased in number to sixteen in the day. Bromide of potassium was pushed to ninety grains in twenty-four hours without affording relief. The wound at this time had not healed; after cicatrization was complete the epilepsy ceased, and had not returned in the past six months. (2.) A girl aged thirteen had two or three severe epileptic attacks, with loss of consciousness and spasm. Subsequently she had four or five slight paroxysms daily, with loss of consciousness and faintness. She was found to be cutting the last molar tooth on the right side. A dentist was consulted, who applied caustic to the tissue over the tooth, and gave her gum to chew. The tooth came through, and the attacks ceased. The patient had taken bromide of potassium with atropia; the paroxysms were stopped more by putting an end to the irritation than by the exhibition of medicine. She has remained well for a month.

Latent Pneumonia. — DR. STEDMAN related the following case: He had seen, on the evening of the 8th of June, a merchant, aged twenty-eight, of dark complexion, tall and slim, but athletic, who had always had good health. There had been no pulmonary disease in his family, though cardiac disease had been known. The patient was said to have been well till the 6th or 7th, but it was learned that two weeks before he left his yacht at City Point, and ran the length of South Boston to catch a train. His exhaustion after this feat excited remark. On the 4th he drove in an open wagon, insufficiently clad, and was chilled. Dr. Stedman found the pulse 80, the temperature 103.5°, and the respiration 24. The patient complained of violent headache and pains in the back and limbs, which disappeared, however, in three days. A slight cough with no expectoration drew attention to the chest, and the chances of pleurisy or acute tuberculosis were considered; no abnormal physical signs were detected; there was no flush, and dyspnoea was not marked. He had been exposed to measles, and it was uncertain whether he had them in childhood. In a few days there was mild, muttering delirium, with retention and dysuria, requiring the use of the catheter once during the first week. Pressed for a diagnosis, Dr. Stedman called the disease typhoid fever, having another young business man with mild and marked typhoid under treatment not far from this patient. The temperature declined steadily, with morning remissions, till the eighth day of the disease, when it became normal for the remainder of the illness. On the eighth day the daily auscultation of the lungs had been omitted. On the ninth day there were coarse liquid râles with tubular respiration over the lower lobe of the left lung; copious mucopurulent expectoration (never rusty) had begun; great prostration, emaciation, and hacking cough followed in severe paroxysms, and the patient's condition became critical, the above-named physical signs pervading both backs, though never heard in front. There was a bruit of uncertain nature with the first sound of the heart at the apex.

On the 3d of July Dr. Knight saw the patient in consultation; that evening the temperature was 101° for the only time since the eighth day. His condition was called catarrhal pneumonia, and an unfavorable issue was feared.

Dr. Stedman determined on treatment by alcohol, and the patient's stimulus was increased to the full amount he could bear without being tipsy, which proved to be a pint of champagne daily and a bottle of rum a week. In four or five days cough and expectoration lessened, and the lungs began to clear; in a week amendment was marked; in a fortnight he left his room; and in the last days of July he had a drive. On the 1st of August he went to the sea-shore, with no abnormal sounds in the lungs. There remained a souffle at the apex, heard in the base also, with the first sound of the heart. Dr. Stedman asked if his early diagnosis was correct, and if not, what other could have been made before the eighth day.

DR. JACKSON was inclined to regard the case as one of lung disease, in which the cerebral symptoms masked the pulmonary ones.

DR. WILLIAMS, in commenting on the case, considered it one of pneumonia, and instanced Chomel's lecture on latent pneumonia, which he had heard. Sometimes the symptoms in the lung did not come on till quite late.

SEPTEMBER 9 and 23, 1878. *Ovariectomy*. — DR. J. HOMANS related two successful cases of ovariectomy, and showed the specimens. The cases have been published in the JOURNAL.

Cancer of the Oesophagus with Complications. — DR. DRAPER reported the case. A sailor, fifty-two years old, had always been healthy till the middle of last May. His first symptom was hiccup, which annoyed him constantly till the middle of July, when dysphagia supervened. He was then obliged to forego solid food, on account of the difficulty of swallowing and coughing which it caused. At his entrance to the City Hospital, the 10th of August, complaint was made of pain in the interscapular region and in the front of the thorax. The appetite was good; the tongue was covered with a thin, moist, light-colored coat. The pulse was 132, weak and regular, stronger in the right radial than in the left, and dysphagia was well marked. Solid food could not be borne, and all attempts at swallowing liquids were conducted with great caution and anxiety by the patient, to avoid violent cough and dyspnoea with regurgitation. The facial aspect showed mental depression and solicitude, but the skin was natural in appearance. Physical examination of the chest failed to discover any unequivocal signs of disease in the heart and lungs. The apex beat of the heart and maximum intensity of the first sound were observed to be displaced downward and to the right, but there was no indication of an organic lesion in the heart or its vessels except the violent action and difference in the radial pulse. There were no abdominal symptoms.

During the month following the patient's admission to the hospital he improved considerably in condition. The diet was carefully regulated to suit his wants, and he took sufficient milk to satisfy hunger. There was, however, a slight loss in weight. The stomach was quiet, and the bowels acted normally. The heart's action improved, the pulse falling from 130 to 60. Sleep was more quiet with the aid of cough mixtures. The patient went about the ward, complained less of pain in the chest, difficulty of swallowing, and cough, and appeared more hopeful; he was able frequently take liquid food without mishap if he swallowed slowly, but any unguarded attempt at deglutition was attended with risk of spasm of the oesophagus, with attendant cough. One

week before his death the patient was suddenly seized with sharp pain in the right side, below the nipple. Dyspnœa and lividity with irregular action of the heart accompanied this pain; the pulse was 120, the respirations 44. The next day the temperature, previously normal, was 101.4°. The expectoration was scanty, thick, light yellow. There was dullness on percussion in the right lower lobe, with great tenderness. Auscultation gave bronchial and bronchovesicular breathing in the same region with the dullness; there were no râles.

The third day the symptoms and signs were those of pneumonia. The pulse was 144; the respirations were 40. Opiates were continued, and stimulants were added. The fourth day there was slight improvement, with less fever and distress. During the interval since his sudden seizure the patient had resisted persuasion to take solid food, but now manifested a readiness to resume his milk with the addition of brandy. The improvement in the rational and physical signs remained, and in some respects progressed during the two days following, but there were repeated and prolonged attacks of coughing. The heart was acting better than for many weeks, and the stimulants were reduced from six to four ounces of brandy daily. In the morning of the seventh day, after a comfortable night, it was noticed that the respirations were more hurried, and that the sputa were of a dirty dark-brown color, very thin in consistence, of a scarcely perceptible acid odor, and considerable in amount. Auscultation showed gurgling and cavernous respiration throughout the lower half of the right chest in front, with tympanitic resonance on percussion. At the left base in the axillary line fine crepitant râles were heard over a space as large as a silver dollar. The respirations were 44, and the prostration was extreme. The skin was cyanosed over the forehead and cheeks. The next day, in addition to the above physical signs, there were superadded in both lungs abundant sonorous, sibilant, and fine mucous râles. A severe paroxysm of pain in the chest in the afternoon was relieved by morphia subcutaneously; in a recurrence of the paroxysm a few hours later the patient died. At the autopsy the peritoneal sac was distended with gas and the peritonæum highly injected, while a perforation had taken place through the anterior wall of the duodenum. There was found to be a cancerous new growth in the œsophagus, commencing just above the bifurcation of the trachea, and extending two and a half to three inches downwards. A quite extensive ulceration had occurred, with perforation of the œsophagus, into one of the posterior branches of the right primary bronchus. The œsophagus, just above the cardiac orifice of the stomach, was the seat of a round, perforating ulcer an inch and a quarter in diameter. A duodenal ulcer was found, irregularly figure-of-eight shaped, extending through the muscular coat, situated chiefly on the posterior wall, and commencing just without the pyloric orifice. It extended two inches down the gut, and perforation had occurred in the upper portion. There was a large cavity in the lower lobe of the right lung, with shreddy, necrosed walls, and filled with a sour-smelling, dark, brownish-green fluid. Perhaps two thirds of the lobe were included in this disorganized portion of lung, and the pleura over it was reddened, injected, dull, and covered with false membrane.

Head of the Tibia removed subperiosteally for Caries.—The case was reported by Dr. BRADFORD, and has appeared in full in the JOURNAL.

Plugging of certain of the Cerebral Vessels.—Dr. EDIS reported the case.

A woman sixty years old, married, in rather destitute circumstances, entered the City Hospital May 30th. She kept having semi-convulsive or spasmodic attacks, chiefly of the upper part of the body, accompanied by outcries of pain or fear. She called them chills. There was a systolic murmur of the heart at the second intercostal space on the right. She had so-called rheumatism in the previous November and December, accompanied and followed by some numbness in the left hand and by severe pain in the left ear. She had also had, beginning December 11th, what was considered by her physician a syphilitic roseola, and admitted the possibility of infection. She improved under mercury and iodide of potassium. The patient is said to have had a fit on May 10th, with general convulsions, after which the left hand was numb. The symptoms improved under good diet and tonics, with some bromide and chloral, but about June 20th there was an increase of her nervousness. There was delirium, a good deal of unintelligible muttering, but also certain well-marked delusions as to being abused, and especially with reference to her husband. Her mind seemed to run on sexual matters. At this time a well-marked hemiplegia made its appearance. It lasted for a number of days, and began gradually to diminish, until on August 6th, a few days before her discharge, it had left only slight traces, and her mind had become much clearer.

Neither ophthalmoscope nor otoscope disclosed anything abnormal. After leaving the hospital she remained well three weeks. On September 1st violent pain on the right side of the head occurred, followed by paralysis beginning on the right side of the face and left arm, and gradually involving the left leg. Speech became indistinct the 11th and 12th, and on the 15th death took place.

At the autopsy the body was found well nourished. The calvaria was thick and dense. The pia mater at the vertex was distended with serum, and the brain generally was rather full of blood. The arteries at the base of the brain were thickened in various places and filled with dense plugs. This was the case on both sides at the origin of the anterior and middle cerebral arteries, and at the remoter points of division of the latter. The basilar artery was also plugged. A small spot of softening was found, too, at the point of the right temporal lobe. (A.)

At about the middle of the nucleus lenticularis on the right side there was a small cyst 1.5 centimetres long, with tolerably defined walls, and containing a few drops of turbid fluid. The long axis of the cyst was up and down. (B.)

On the upper surface of the left lobe of the cerebellum there was a considerable space of yellow softening. (C.)

In the posterior third of the pons, near the lower surface and close to the median line, there was a small, ill-defined spot of softening as large as a pea. (D.)

Throughout the left side of the lower part of the parietal and frontal lobes the cortical substance had, on section, a more yellowish hue than elsewhere or than normal. (E.)

There was no valvular disease of the heart, but the walls were quite soft. The liver contained a small cyst on its upper surface, and a portion of the capsule near the gall-bladder was thickened. The kidneys were rather soft and cloudy. The spleen was not enlarged.

On microscopic examination B, C, and D were found to contain numerous granulation corpuscles and more or less of normal elements (D least). No crystals or granules of hæmatoidine were found, and only a few masses of light yellow pigment. E. The general substance was more granular than normal, The larger nerve-cells were very decidedly fatty. The kidneys were granular and fatty.

At the points of apparent thickening of the arteries were dense fibrinous plugs more or less adherent to the walls of the vessels. In the anterior vessels (carotids, anterior and middle cerebral) these were white; in the basilar, one at the bifurcation was red and dense, one posterior to this, loosely adherent, was less dense and dark colored. Examination by the microscope showed no thickening of the intima; the outer part of the arterial wall contained or was composed of numerous small cells. The plugs, which were closely adherent to the walls, the intima forming a nearly white line between the portions stained with carmine, were also largely composed of small cells (leucocytes?).

THE CONNECTICUT BOARD OF HEALTH.

THE act establishing a State Board of Health in Connecticut provides that at least three of the six members appointed by the governor shall be physicians and one a lawyer; two retire from office biennially, or are reappointed. Dr. Chamberlain, of Hartford, has been elected permanent secretary, and thereby has become the seventh member of the board, the other physicians being Dr. J. S. Butler, president, Dr. Hubbard, of Bridgeport, and Dr. Lindsley, the well-known health officer of New Haven, to whom we are glad to add the name of Professor Brewer. The board have advisory duties, are required to make investigations as to causes, prevalence, prevention of disease, etc., distribute information, coöperate with local boards for suppressing epidemics, supervise registration of vital statistics, and may employ experts or agents to make inquiries.

From their first report one may readily see that they have entered upon their responsible work with broad and intelligent views, and that they are advancing "in that higher line of political economy which is sure to lead a State to increased power and wealth." The facts and suggestions with regard to state medicine, infectious diseases, registration of vital statistics, and pollution of streams are full of interest and value. Diphtheria has been prevalent during the past year, associated, for the most part, with bad drainage. A marked increase in the prevalence of malarial fever is noted, and is a subject which we hope the board will further investigate. Typho-malarial fever appeared for the first time in the published mortality lists in 1877, and there were quite frequent cases in 1878, although no epidemic occurred except in and near Hampden, where (including Derby) there were twenty-one deaths from it. In Hartford, New Haven, and Salisbury it was reported of decidedly increased prevalence and extending over a wider area. In Durham ten cases were attributed to recent drying of a fifty-acre bush-swamp. Malarial fevers of local origin were reported, during the year, for the first time in several towns. An extensive epidemic of typhoid fever was traced to the use of polluted drinking-water taken temporarily from the river.

RECURRENCE OF YELLOW FEVER ON BOARD A REFRIGERATED SHIP.

THE United States steamship *Plymouth*, Captain Harmony, which left Boston March 15th for a cruise to the West Indies, has returned to Vineyard Sound on account of two cases of yellow fever occurring on board when about three hundred miles southeast of the Bermuda Islands. The ship had been in Boston during the winter, and as she had come from the West Indies last autumn with yellow fever on board, she had been frozen out and fumigated. As the ship had not called in any port since leaving Boston, this development showed that the germs of yellow fever still existed in her.

This occurrence as recorded in the daily press is interesting and important in connection with a recurrence of yellow fever at New Orleans during the approaching summer, a possibility which is anticipated with considerable anxiety by inhabitants of less exposed parts of the country, at least, if not by those of New Orleans itself. That city apparently is contented with congratulating itself upon the unusual severity of the past winter and appointing a sanitary committee or two. As far as we know, nothing has been done to correct the sadly filthy state in which the outbreak found the city last year; and if this filthiness is no greater now than then it has at any rate been testified to by a greater number of witnesses. This survival of the poison of yellow fever on board the *Plymouth*, if authenticated, has also an important bearing upon the proposal to attach refrigerating ships to quarantine stations. This was a scheme in which the late Dr. Woodworth was interested; and an appropriation of \$200,000 has lately passed one branch of Congress for the construction of such a ship. We do not know the result of the experiments undertaken to test the value of this system for making infected vessels harmless. It is, however, stated that the *Plymouth* was thoroughly fumigated and refrigerated. The fumigation may perhaps have been thorough, but there can hardly be any doubt as to the thoroughness of the refrigeration if she lay at Charlestown with open hatches for any length of time this past winter.

MEDICAL NOTES.

—The Paris correspondent of the *British Medical Journal* announces the appearance in French of Annie Besant's notorious and extraordinary pamphlet on the means of preventing conception. But pachydermatous as the French are commonly supposed to be in regard to literature of "Frenchy" character, the Besant production has so shocked them that a petition for the suppression of the pamphlet has been presented to the director of the press, the work being considered unscientific as well as filthy. The correspondent, moreover, says that the introduction of the book into France at this time is a misfortune, because of a steady decrease in the population, which has so alarmed the nation that popular works are published on all sides to teach better management of infants, and check the excessive infant mortality which now prevails in France.

NEW YORK.

— The committee on tenement-house reform, appointed at the mass meeting held in the Cooper Institute, on the 28th of February, have made a preliminary report, in the course of which they state that, although they believe that much may be accomplished by legislation and by the establishment of limited-liability building companies, there still remains a necessity for a permanent fund, of which both the principal and interest shall be exclusively devoted to the building of model lodging-houses for the laboring classes. This is the plan of the Peabody fund in London, and the committee think that it is not improbable that a number of citizens can be found to do for New York what George Peabody did for London. It is therefore proposed that a fund of one million dollars be formed by subscriptions of five thousand dollars, but that no subscription is to be payable until two hundred and fifty thousand dollars have been subscribed. After giving the details of the contemplated scheme, the report recommends the passage by the legislature of a bill covering what the committee think the necessary points of reform, which aims at more light, more ventilation, more space for each lot, and more definite provision against overcrowding, and includes a system of sanitary police and licensing of all tenement houses by the board of health.

The report also contains an allusion to the present filthy condition of many of the streets (a matter that is exciting a good deal of public attention and indignation), which is not only a source of discomfort and disease, but precludes the possibility of maintaining cleanliness and neatness in the tenement-house localities.

— One of those blood-curdling sensations with which the newspapers delight to entertain the community has just been exploded by the prompt action of the health authorities. Word having been sent to the husband of an inmate of the female insane asylum on Blackwell's Island that she was dying, he concluded to remove her to his home in the lower part of the city; but as he was in a state of intoxication when he reached the island, he was refused permission to do so. Still persisting in his determination, however, he returned when sober, and took his wife away, although warned that she would probably die before she reached her destination. As she was much emaciated and there were spots of purpura upon her body, he got it into his head that she had been starved, beaten, and otherwise maltreated while in the institution, and called in the services of a physician of the neighborhood, who had only recently moved to New York, and who very foolishly allowed himself to be influenced by the man's story. She died very shortly, and accompanying the certificate, which stated that the cause of death was inanition, the physician sent a note to the health department, intimating that this was due, in part at least, to the bad treatment which she had received in the asylum. The deputy register of vital statistics, Dr. Nagle, at once placed the case in the hands of the coroner, who, with a jury principally composed of well-known physicians, made a careful investigation of the whole matter. The result demonstrated that the woman had received the best of treatment during her sojourn on the island, and that her death had occurred from purely natural causes. At the inquest it was shown that she had long been suffering from general paralysis and uncontrollable

diarrhoea, and the autopsy proved that death had been due to chronic meningitis, with effusion into the ventricles and softening of the brain. No marks of violence of any kind were found, nor were there any evidences whatever of starvation. Consequently, the verdict of the jury declared that the charges which had been made against the institution were not sustained.

— Of late the members of the vaccinating corps of the board of health have been visiting the various station-houses of the city at night, for the purpose of vaccinating the tramps and other vagrants accustomed to seek lodgings there. The city has been so entirely free from small-pox for the last two years that it is certainly desirable that every precaution should still be taken to keep it away from the community.

PHILADELPHIA.

— At the County Medical Society, Dr. Cheston Morris recently presented a paper on Cow's Milk as Food for invalids and in health. His conclusions were that pure, fresh milk is not to be obtained from the "milkmen." He advocated the adoption of a plan that has been in successful operation in New York for three years, under the charge of a Mr. Leister, who proposes to put the milk in quart jars at the dairy, which are then hermetically sealed and delivered to the customers, the empty vessels being collected each morning. This plan eliminates all the chances of adulteration, skimming, or watering by middle-men, and will undoubtedly meet general approval.

CHICAGO.

— Three weeks ago the West Chicago Medical Society passed a resolution declaring its opinion of the duty of the State Board of Health to be to procure an amendment to the law relating to the collection of vital statistics, providing for a compensation for the reporting of births and deaths. At the next meeting of the Chicago Medical Society a similar resolution was passed unanimously. The attention of the profession throughout the State has been called to the matter by circular, and the scheme is meeting with much more general favor than any member of the society had expected. The president of the State Board, Dr. Wardner, has written a letter in which he gives the move his unqualified indorsement, and says he will lay the matter before the board at the next meeting. The labor of procuring an amendment to the law at the hands of the legislature, with the great press of other business which that body is loaded with, is not a small one, and although every physician in the State might petition for such an amendment, it would not necessarily follow that it could be passed.

The ground on which such legislation is asked is the double one that it is unjust to ask physicians to be gatherers of vital statistics for the State without compensation, and that under the present system such statistics are and must be imperfect and unreliable. Every week, nearly, here in Chicago, some physician is heard to say that he does not report any births occurring in his practice; that he cannot be compelled to, and that he simply does not care to. If the feeling of the profession of Chicago is a fair measure of that of the profession of the State, and if accuracy of statistics is to depend on the disaffected ones being compelled by process to make reports, it will perhaps never be

attained. Perfect statistics will depend on unanimous coöperation of the profession in the work.

—Dr. C. W. Earle recently reported a very instructive case of intussusception in an adult that resulted in death, and that was not suspected until revealed by the post-mortem examination. The patient was a woman of thirty-two years of age, who had been previously generally vigorous. She was peculiar in her organization in being insusceptible to pain. A few months before the present sickness she had been delivered of her first child by forceps with great difficulty, and yet experienced no pain whatever.

For more than a week before she went to bed with this illness she had complained of slight pains in the epigastrium, most after eating, and had taken for them some simple remedy, they being supposed to be due to indigestion. As she grew worse the doctor was sent for, who gave cathartics to relieve a condition of some constipation. In two or three days these operated freely and fully, at least two large battery stools, following some smaller ones of hard masses, were voided. But the pains did not entirely disappear, and vomiting began, persisted, and was frequent. Once something like stercoraceous matter came up. No fever or tenderness in the abdomen occurred and the mind was clear. Great depression and finally collapse ensued. Digital examination of the vagina revealed a tumor in front of the uterus pressing that organ and the bladder firmly downward. Even this was not tender. Before death the view taken of the case by the attendant and Drs. Byford and Fitch in consultation was that an internal hemorrhage, possibly pelvic, had taken place, and was causing the prostration.

The examination of the dead body revealed an intussusception of the small intestine a few inches above the ilio-cæcal valve. There was no other lesion of any kind; no adhesions except within the intussusception. The infolded mass was about six inches long.

—Dr. Cornelius A. Logan, recently appointed minister to Central America, has been a resident of Chicago and engaged in practice since his return from the mission to Chili, upwards of two years ago. Whatever his capacity as a United States minister may be, those of the profession here who have made his acquaintance are sure that in his departure we lose a high-minded and cultivated physician and a very genial gentleman.

WASHINGTON.

—The special committee of the United States senate to investigate and report upon the best means of preventing the introduction and spread of epidemic diseases is composed of the following: Harris of Tennessee (chairman), Lamar of Mississippi, Garland of Arkansas, Jonas of Louisiana, Paddock of Nevada, Sharon of Missouri, Platt of Connecticut. This committee has already had several bills and resolutions referred to it, as:—

Senate bill 55, to authorize the secretary of the treasury to construct a refrigerating ship for the disinfection of vessels and cargoes.

Senate bill 108, to prevent the introduction of contagious or infectious diseases.

Senate resolution 9, requesting Drs. Bemiss and Cochran and Engineer

Hardie to complete their reports upon the yellow fever epidemic of 1878, for the use of Congress.

In the house, a committee with similar powers and scope to those of the senate has been asked for by Young of Tennessee, and Cox of New York, and will probably be appointed at an early date.

— Dr. Jas. F. Harrison, of Virginia, has petitioned Congress for the removal of his political disabilities.

ST. LOUIS.

— A case of hernia vaginalis anterior, with an operation resulting in a radical cure, was reported at the last meeting of the St. Louis Medical Society. It is thought that there is no similar case on record. The woman was about twenty-five years of age. She had given birth to two children. The hernia came down, a little in front of the neck of the womb, into the vagina, occasionally protruding from two to three inches beyond the vulva. It was diaphanous, and its contents were easily recognized as a loop of the small intestines. Dr. G. M. B. Maughs, of this city, was called to see the case by Dr. Paul F. Eves. Sims's operation of elytrorrhaphy for procidentia was performed by Dr. Eves, who then left the city. The irritation of the wound seems to have produced sympathetic coughing, for a cough at once set in, which prevented the union of the denuded surfaces. This measure was tried three times, however, but always failed from apparently the same cause. This plan having had a fair trial, and the woman feeling that she would die unless a successful operation was performed, Dr. Maughs carefully removed the mucous membrane which covered the hernia, denuded the wall of the vagina for about a quarter of an inch around the opening through which the intestines had descended, and also freshened about an eighth of an inch of the hernial canal. The freshened surfaces were then joined by a quill suture, placed transversely to the axis of the vagina; the surfaces brought in contact were nearly half an inch in width. Superficial sutures were also used. In about twenty-four hours the quill sutures suppurated out. (This was before the days of carbolic acid.) In ten or twelve days the superficial sutures were removed, and the patient discharged, well. Seven years afterward Dr. Marion Sims saw the case, and took full notes of it. The woman was in perfect health; since the operation she had given birth to two children, and the only evidence of her former affliction was a narrow white line crossing the anterior wall of the vagina.

SANTA BARBARA, WITH REMARKS ON CALIFORNIA.¹

MR. EDITOR,— Having passed the last winter in Santa Barbara, I had an opportunity of witnessing the wonderfully beneficial influence of the open-air life in that region upon invalids, especially consumptives, though the rainy season was one of exceptional severity. There is, however, urgent need of more careful discrimination by the profession in sending cases thither. I knew a young gentleman sent out by a leading surgeon of Philadelphia. He left a wife and child, and went alone, though in an advanced stage of consumption.

¹ Read before the Suffolk District Medical Society.

He bore the journey badly, and after a life of misery there hastened home. I knew a gentleman sent thither by a distinguished Fellow of this society. He too was far gone in consumption, and should never have left his home. As a rule, patients should go early in the course of their disease, and be prepared to make a long stay. But I do not wish to be understood as advising that no hopeless cases be sent. There are exceptional instances in which one has independent financial means, and can be accompanied by those most dear to him, so as to have the comforts of a home; then life may be prolonged, and death made easy. It is difficult to define a hopeless case, for many which are apparently hopeless will recover there. But it is certain that many go to their own injury, and the profession should pay more attention to the patients' circumstances aside from their physical condition.

During the winter more than thirty inches of rain fell in the town of Santa Barbara, and several inches more in the country around. Two years of drought had preceded these rains, and caused much poverty. The adobe houses of the Spaniards, when properly built, with verandas and cemented floors, are well-suited to this semi-tropical climate. But many of these houses are not properly built. From these causes diphtheria and typhoid fever prevailed extensively among the poorer Spaniards, but, I believe, were exclusively confined to that part of the population. In a newspaper published in Santa Barbara, of which a copy has just reached me, is given the testimony of physicians and others as to the unusual physical development of children, and their freedom from diseases, especially croup and gastro-intestinal affections. My observations confirm these statements. There are in Santa Barbara well-educated and reliable practitioners of medicine. There are others who are both ignorant and unscrupulous. Having known most deplorable results from the frequency with which patients fall into the hands of the latter class, I recommend that physicians in sending patients thither assist them in advance in the choice of their future medical attendant. Well-qualified pharmacists, with well-appointed drug stores, are to be found, but, as in the choice of a physician, one must be on his guard against gross incompetency.

If I were to return to Santa Barbara, I should go by way of the Chicago, Burlington, and Quincy route from Chicago to Council Bluffs, from Omaha to Ogden by the Union Pacific, and from Ogden to San Francisco by the Central Pacific. The train moves very slowly across the plains and alkali desert, and the journey from Boston to San Francisco now occupies seven days. Arrangements are expected soon by which the journey will be made in six days. To go by Pacific mail steamships is somewhat less expensive. The journey from San Francisco to Santa Barbara, two hundred and eighty miles, is made on the coastwise steamers, of which the most comfortable are the *Orizaba*, *Senator*, and *Ancon* (side-wheeler). One will add materially to his comfort by providing himself with a hamper of eatables for the trip along the coast.

The city of Santa Barbara nestles down in a valley between the Santa Ynez range of mountains, with their foot-hills, and the sea. It is forty miles from Point Conception, and thirty from the town of San Buenaventura. It is built on an inclined plain, which slopes upward from the sea and faces nearly

directly southward. Snow never crosses the green foot-hills into the little valley, and frost is rarely known. The two predominant native trees are the live-oak, which dots the neighboring hills, and the sycamore. The eucalyptus globulus, the so-called blue-green tree of Australia (though it really came from Tasmania), has been planted in and about the town, and grows with astonishing rapidity. Roses bloom luxuriantly the year round, callas in thick clusters, the showy Pampas plumes, and various tropical trees. I have never seen elsewhere such handsome fuchsias.

When I visited Santa Barbara, in the winter of 1877-78, the population was estimated (perhaps overestimated) at six thousand, — four thousand whites, the rest Spaniards, Mexican half-breeds or "greasers," and Chinese. In 1870 there were thirty-five white inhabitants, and the town was almost unknown east of the Rocky Mountains. Santa Barbara is a winter resort. The rainy season begins usually in October or November, and continues till May. The average rain-fall is fourteen inches. The rain brings out the rich verdure, and in the intervals between the rains one can enjoy the bright, sparkling weather. I have bathed in the sea every month of the rainy season, from December to May inclusive. At the end of the rainy season come the fogs, lasting throughout the forenoon, or more rarely all day. Then the invalids depart to visit the magnificent Ojai valley, carpeted with a rich flora, to the Yosemite, or to their homes. The chief amusement is horseback riding. A well-trained mustang can be obtained at any time for twenty-five or thirty dollars. They are controlled by the Spanish bit, often cruelly abused. Barley enough to feed him a month can be obtained for six dollars. Except occasionally, in the wettest weather, the roads are excellent. The Arlington Hotel is a commodious and well-kept house, so constructed as to give the largest possible number of sunny rooms. In California a sunny room is essential to health and comfort. The contrast between sunshine and shade is very marked. The charges at the Arlington Hotel are moderate. If one chooses to keep house he will find it costs about the same as here to supply a table. Groceries cost double what they do here; meats, including game in season, are sold at a moderate price, and vegetables are very cheap. Vegetables are raised in an Italian garden, but are commonly obtained from Chinamen, who bring them to the door. I know a family of three whose table is plenteously supplied with vegetables for seventy-five cents a week. There are good schools, public and private, churches of various denominations, two banks, and a theatre, owned by Signor Lobero, a retired Italian opera manager. The climate of Santa Barbara is most equable, the difference between the highest and lowest temperature in the year being but forty degrees of Fahrenheit. This equability is doubtless due to its proximity to the sea and its sheltered position. The coast range shelters it from cold northerly winds, while the Santa Barbara Islands protect it from the opposite quarter. In the coldest weather a small wood fire is necessary morning and evening. It would perhaps be proper to speak of the climates of Santa Barbara. Some invalids will do best near the Mesa, a table-land near the sea. Others find higher and dryer localities more beneficial. Immediately after sunset a cold wave of atmosphere occurs, and continues about an hour, to be followed by greater warmth. There is no malaria in the town or its environs.

The bathing season begins in May and continues all summer. The bathing facilities are excellent. Connected with one of the bath-houses are convenient arrangements for sun-baths, and I have known a tuberculous patient to derive much benefit from them.

The Spanish women are usually attended in confinement by midwives. Some of my medical friends were called late to one of these cases. The membranes had long been ruptured; a shoulder presented, and was crowded into the pelvis. They succeeded in performing version, but the child was dead. The Spaniards are strongly opposed to post-mortem examinations.

The best description of Santa Barbara ever published is from the pen of Albert F. Webster, and appeared in *Appleton's Journal*. Santa Barbara as a health resort has its disadvantages. It is a long distance from an Eastern home,—longer than the visitor may realize till he has made the journey. For eight days during the past winter communication by mail with the East was interrupted, and during a shorter period by telegraph. Occasionally a dust storm arises, which is intensely disagreeable. I have known a few raw, windy days, much like our own March weather. The opportunities for shopping are very inferior, and many persons obtain their clothes, even boots and shoes, by mail from the East. The prevailing diseases on the Pacific coast seem to be rheumatism, neuralgia (especially sciatica), and nasal catarrh. A friend, for the last twelve years an oculist in San Francisco, tells me he has met in his practice a large proportion of cases of episcleritis. A physician of San Buena Ventura, and lately of Philadelphia, finds uterine disease exceedingly prevalent, and attributes its frequency chiefly to too early rising after parturition. The same class of diseases appear to be common in San Francisco and Oakland, and in those cities criminal abortions and the employment of midwives must be powerful factors in their production.

My knowledge of California is chiefly derived from visiting four places, differing widely in climate and the character of their inhabitants: San Buena Ventura, the centre of an agricultural region, with a settled population; Santa Barbara, whose population is largely transient and invalid, and where the active interests of the place are rather horticultural than agricultural; San Francisco, a cosmopolitan city, whose climate in the spring and summer, when the trade-winds blow and the fogs roll in, is very severe; and Oakland, a city of residences, with a climate far milder than the neighboring metropolis.

EDWARD L. PARKS.

SHORT COMMUNICATIONS.

FRENCH QUARANTINE.

A. *Sanitary Measures applicable to the Troopships on the Thyrus at the Mediterranean Ports.*—(1.) Suspected vessel (Article 36 of General Decree) — that is to say, having no actual case of plague on board during the voyage — are admitted to a quarantine in a lazaret. For these boats a quarantine of observation of five to ten entire days, either in the lazaret or on board of the troop-lazaret, is insufficient. The unloading, the disinfection of wearing apparel or of materials susceptible of retaining infection, is obligatory. The quarantine of persons remaining on board during the discharge of the cargo is from five to ten days, and does not commence until after the disinfection of the ship is terminated. (2.) For vessels

which have, or which have had, cases of plague on board (Article 36 of General Directions), if there be any sick, they are immediately disembarked to the lazaret; those not sick are subjected to a quarantine of ten to fifteen days, dating from their entry to the lazaret. The quarantine of persons remaining on board is from ten to fifteen complete days, and, as in the previous case, does not commence before the completion of the disinfection of the ship.

B. Measures applicable to the Prevention of the Introduction of the Plague in the Channel Ports.—Suspected ships (Article 36)—that is to say, not having had any case on board during the passage—are submitted to a quarantine which, if possible, is passed in a lazaret. The quarantine of observation is from three to five complete days, either on board or in hospital. The disinfection of wearing apparel, etc., of articles susceptible of infection, etc., and of the vessel is obligatory. The quarantine of persons remaining on board during the unloading commences only after the disinfection of the vessel, and lasts from three to five days. (2.) For infected vessels the regulations are the same as for those entering Mediterranean ports.

AMERICAN MEDICAL ASSOCIATION.—The thirtieth annual session will be held in the city of Atlanta, Georgia, commencing on Tuesday, May 6, 1879, at eleven o'clock, A. M.

Sections. "The chairmen of the several sections shall prepare and read in the general sessions of the association papers on the advances and discoveries of the past year in the branches of science included in their respective sections." . . . By-Laws, Art. II., Sect. 4.

Practice of Medicine, Materia Medica, and Physiology: Dr. Thos. F. Rochester, Buffalo, N. Y., chairman. Dr. W. C. Glasgow, St. Louis, Mo., secretary. Committees appointed to report to this section: On Clinical and Meteorological Records, Dr. N. S. Davis, Illinois, chairman. Effect of Climate in Colorado on Pulmonary Phthisis, Dr. C. Denison, Col., chairman.

Obstetrics and Diseases of Women and Children: Dr. E. S. Lewis, New Orleans, La., chairman. ———, secretary.

Surgery and Anatomy: Dr. Moses Gunn, Chicago, Ill., chairman. Dr. J. R. Weist, Richmond, Ind., secretary.

Medical Jurisprudence, Chemistry, and Psychology: ———, chairman. Dr. L. M. Eastman, Baltimore, Md., secretary.

State Medicine and Public Hygiene: Dr. John S. Billings, Washington, D. C., chairman. Dr. J. T. Reeve, Appleton, Wis., secretary.

Ophthalmology, Otology, and Laryngology: Dr. H. Knapp, New York, chairman. Dr. X. C. Scott, Cleveland, Ohio, secretary.

The following committees are expected to report: On Prize Essays, Dr. Robert Battey, Rome, Ga., chairman. On Necrology, Dr. J. M. Toner, Washington, D. C., chairman. On Catalogue of National Library, Dr. H. C. Wood, Philada., Pa., chairman. On Recommendations in President Richardson's Address, Dr. T. G. Richardson, New Orleans, La., chairman. On Ozone, Dr. N. S. Davis, Chicago, Ill., chairman. On Sanitaria for Consumptives, Dr. H. I. Bowditch, Boston, Mass., chairman. On Dr. Seguin's paper on the Intervention of Physicians in Education, Dr. R. J. O'Sullivan, N. Y., chairman.

Changes in plan of organization to be acted upon:—

Offered by Dr. J. M. Keller, Ark. Plan of Organization, Art. IV., Sect. 1. In future the committee on nominations shall present the name of no person for appointment or election to office or position save on the committees on necrology and climatology, unless the party nominated be in attendance on the association at the time.

Offered by H. O. Hitchcock, Mich. Plan of Organization, Art. IV., Sect. 1. The several state, army, and navy delegations, including delegates and permanent members, shall, on the first day of the annual meeting of this association, at a meeting publicly called for that purpose, nominate candidates for the several offices of president, vice-presidents, and chairmen for the several sections, and shall choose one of their number to act on the nominating committee of the association, with power to cast as many votes in that nominating committee as there are members of the delegation of which he is a member. Candidates for the several offices above named to be reported to the association shall be selected from the names reported to the committee of the several state delegations.

Offered by Dr. A. N. Bell, N. Y. By-Laws, II. Sections. Consolidate Section 4, on medical jurisprudence and psychology, and Section 5, on state medicine and public hygiene, and call it Section 4.

Offered by Dr. J. J. Caldwell, Md. By-Laws, II. Sections. Form an additional section, to be known as the section on neurology and electrology.

Offered by Dr. T. Clay Maddux, Md. By-Laws, II. Sections. Form an additional section on diseases of the genito-urinary organs, including syphilis and dermatology.

Offered by N. S. Davis, as chairman of a committee. "Code of Ethics." Art. I., paragraph 1, add, "And hence it is considered derogatory to the interests of the public and the honor of the profession for any physician or teacher to aid, in any way, the medical teaching or graduation of persons knowing them to be supporters and intended practitioners of some irregular and exclusive system of medicine."

"It shall be the duty of every member of the association who proposes to present a paper, or report to any one of the sections, to forward either the paper or a *title* indicative of its contents and its *length* to the chairman of the committee of arrangements at least one month before the annual meeting at which the paper or report is to be read. It shall be the duty of the chairman and secretary of each section to communicate the same information to the chairman of the committee of arrangements concerning such papers and reports as may come into their possession or knowledge, for their respective sections, the same length of time before the annual meeting. And the committee of arrangements shall determine the order of reading or presentation of all such papers, and announce the same in the form of a programme for the use of all members attending the annual meeting."

WM. B. ATKINSON, M. D., Permanent Secretary.

PHILADELPHIA, 1400 PINE STREET, S. W. CORNER BROAD.

APPOINTMENT. — Dr. J. B. Swift has been appointed port physician in place of Dr. Wallace, resigned. The resignation takes effect April 15th.

BOOKS AND PAMPHLETS RECEIVED. — Health Primers. No. 6. Baths and Bathing. New York: D. Appleton & Co. 1879.

Chemistry, General, Medical, and Pharmaceutical, including the Chemistry of the United States Pharmacopœia. A Manual on the General Principles of the Science and their Applications in Medicine and Pharmacy. By John Attfield, M. A., Ph. D., of the University of Tübingen. Eighth edition, revised by the author. Philadelphia: Henry C. Lea. 1879.

Ringworm in Public Institutions (American Medical Association), and Rosacea. By John V. S. Shoemaker, A. M., M. D. 1878.

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LECTURES.

CLINICAL LECTURES ON THE PHYSIOLOGICAL PATHOLOGY OF SYPHILIS.¹

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK, SESSION OF 1878-79.

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II. INITIATORY PERIOD OF SYPHILIS.

GENTLEMEN, — Two of the common forms of the initial lesion of syphilis were presented to you at our last session: (1) *the papule*; (2) *the abrasion*. Both were shown to be associated with a well-marked induration, distinctly traceable to a cell development and accumulation in the tissues underlying the point of syphilitic inoculation. The character of the cells composing the induration was not found to be different, microscopically, from that of normal germinal cells; but in their crowding of the tissues, and more especially of the walls of the vessels, to the extent of obstructing to a greater or less degree the processes of nutrition, this induration was shown to be unlike the results of cell accumulation from ordinary inflammatory causes. Furthermore, this accident, taking place independently of any evidence of inflammatory action, seemed to warrant a conclusion that the cells of the syphilitic induration were, in great measure, if not wholly, the product of a local proliferation, and the result of an impetus given by the disease germ of syphilis.

If we accept the statements of authorities in regard to the nature and powers of human embryonal cells, and also those of the disease germs (which are claimed to be but degraded forms of these cells), we are furnished with an explanation of this local cell proliferation, as indicated (page 218) in the previous lecture.

In the cases presented it was claimed that this localized cell accumulation and its legitimate sequences caused the characteristic induration in the first case; and also, by interference as foreign or superfluous ma-

¹ Reported by P. Brynberg Power, M. D.

terial, caused the disturbance of nutrition which resulted in the abrasion in the second case. This view is fully supported by clinical experience. The indurated papule in Case I. is the type of a large class, in which the initial lesion of syphilis appears at varying intervals after the healing of the surface of inoculation. From its inception to its disappearance, either with or without treatment, it may be quite free from any evidence of inflammatory action, and yet it is followed by the consecutive evidences of constitutional syphilis as soon and as certainly as any other recognized form of initial lesion.

The second case, that of the *indurated abrasion*, was also typical, and showed the manner in which the open initial lesion of syphilis is formed, independently of any external influence, and simply through interference with the nutrition of the indurated tissue.

This process, which has previously been referred to as a *necrobiosis* (page 220), first recognized in the abrasion, may, if continued, result in a gradual loss of substance (chiefly confined, however, to the neoplasm), producing finally, in various degrees, the saucer-shaped, non-suppurating, indurated sore known as the typical *Hunterian chancre*.

The impression given by some authorities is that this latter is the characteristic form in which the initial lesion of syphilis is usually met. This is an error. My own experience is in full accord with that of M. Bassereau (quoted by Dr. Bumstead¹), who states that out of one hundred and seventy cases of syphilitic erythema observed by him the initial lesion preceding the eruption appeared in the form of a *superficial erosion* in one hundred and forty-six cases.

It will, I think, become evident to you, as we proceed, that the initial lesion of syphilis has no arbitrary form, but takes its peculiar aspect from physical conditions and causes which vary greatly in different cases; dependent, when uncomplicated, upon a localized cell accumulation, free from any specific irritating property, as a basis of the local disturbance in every instance.

I am able to present to-day a typical case of the so-called Hunterian chancre, — the *saucer-shaped, non-suppurating, indurated* initial lesion of syphilis: one which will serve not only to illustrate the manner in which loss of tissue takes place in the uncomplicated initial lesion of syphilis, but also to emphasize certain other points of importance already briefly spoken of.

CASE III. This young man gives an account of a single venereal exposure in the early part of October last; none during the three months previous, none since. As you see, his penis presents no external evidence of inflammatory disease. The very redundant prepuce is free from œdema and normal in color. On the left side, however, corresponding to the sulcus behind the glans, you may observe quite a pro-

¹ Third edition, page 418.

jection. To the touch it is about the size and shape of an almond, and almost as hard. The loose tissues of the prepuce move over it readily. On pressure between my fingers there is no complaint of pain. When first noticed, about a month after his exposure, it was about the size of a pea. Since that time, without treatment, as he states, and without any especial discomfort to him, it has been steadily increasing until the present. During the last month or so he has observed some "lumps in his groin," and within a few days some "reddish spots" on his body.

You have already made up your minds as to the character of the disease with which this patient is *afflicted*, — not with which he is *suffering*, for he asserts that he has had no pain at any time. This leads me to remark that pain is not an essential element in syphilis; even when thoroughly characteristic, it is often absent throughout the entire course of the disease.

The induration under the prepuce, in connection with the previous history, points squarely to the site of a syphilitic inoculation.

Turning back the redundant preputial tissue, I bring into view, not a destructive suppurating ulcer, but a deep red protuberance, an outgrowth from the sulcus at the base of the glans penis. Upon the summit of this is a depression a quarter of an inch in depth, sloping on all sides to the centre. This presents a raw granular surface, of a vermilion color, covered with a moist, transparent secretion. Pressure against the sides of this mass whitens the border of the excavation, very much as the same effect is produced upon a congested palpebral conjunctiva, pressed against by the tarsal cartilage when the eyelid is turned back.

It is very evident that the open condition of this lesion has not been brought about by external influences. It has been perfectly protected by the healthy and more than ample prepuce. There is not the slightest evidence of any suppurative action, or of any rapid destruction of tissue, as in chaneroid or other pus-producing sore. It is true, there is an evident loss of substance, and yet this has not been at the expense of the normal structures. I could cut down the mass for a full quarter inch, and still not encroach upon the cavernous body with which it is in close contact. Thus intimately connected with the deep tissues, it is almost immovable, and as resilient as cartilage or an epithelioma, for which a cursory examination might have easily mistaken it.

The open lesion in this case can only be explained by assuming for this loss of substance the same process of dissolution which produced the abrasion in the former case, namely, a *necrobiosis*, — molecular disintegration from *innutrition*, or, according to Blesiusdecki, *anemia of tissue*, caused by obstruction of the vessels of nutrition through the accumulation of more or less vitiated cell material.

Various conditions and influences, local as well as general or consti-

tutional, may give rise to complications in the progress of a simple necrobiosis. Thus it may be superseded by a slower or by a more actively destructive process.

Initial lesions, thus altered, have received names intended to express the nature of the complication. Thus we have the *mucoid* form of initial lesion or chancre, from its resemblance to the so-called mucous patch; also the *inflamed* or *suppurating* chancre, the *phagedenic* or *gangrenous* chancre. These modifications will receive especial consideration later, when we have the opportunity of illustrating them by presenting cases. So great an amount and degree of induration in the initial lesion of syphilis as in the present case is quite exceptional, although we shall find that it varies from that which barely stiffens the base of an initial lesion to one even greater in extent than in the instance before us.

The date at which the induration of the initial lesion of syphilis makes its appearance and the time of its continuance are alike variable. The period intervening between the inoculation and the appreciable presence of the characteristic induration has already been alluded to. This is characterized by many authors as *the period of incubation*. The idea of an incubative period, however, is necessarily connected with the claim that the virus of syphilis, once introduced, spreads from the point of inoculation by a sort of mysterious fermentation through all the channels and tissues of the body until, infection thus becoming complete, this event is announced by a reaction at the point of inoculation in the shape of an induration. Hence, in accordance with this idea, the initial lesion is, of necessity, considered the evidence of *complete constitutional infection*, and not the localized commencement of it, according to a strictly physiological view of the case. Proposing, however, to adhere as strictly as possible to the latter method, we shall be obliged to discard the term incubation in this connection as incorrect, and shall speak of this interval, greater or less, which is known to occur between the date of inoculation and the appreciable presence of the localized induration as the first stage of the *Initiatory period* of syphilis. This interval, according to the weight of clinical authority, is fixed at from fifteen to twenty days as the average. Of the two hundred and sixty-one cases observed by Sigmund the average was seventeen, ranging from four to twenty-one. Forty-five cases, reported by Fournier, averaging thirty-one days, varying from four to seventy. Rollet presents the results of artificial inoculation with the syphilitic virus in twenty-six subjects; the shortest interval before the appearance of the characteristic initial lesion was ten days, the longest thirty-nine; average, twenty-five days. Dr. Bumstead reports an interval of fifty days, Dr. Hammond one of three. The late Dr. J. C. Nott reported his own case (referred to in the previous lecture), where but twenty-four hours

elapsed between the wounding of his finger with a spicula of the bone of a syphilitic to well-pronounced axillary-gland enlargement, and this followed by a general syphilitic eruption within six weeks thereafter. Dr. R. W. Taylor reports two cases, in one of which the initial lesion made its appearance within twenty-four hours after connection, followed by characteristic induration within four days, and in six weeks by general syphilis; in the other the induration was discovered within a week after exposure, and evidences of constitutional syphilis at the end of the fifth week. *In both these cases the initial lesion was situated at the junction of the frænum with the glans penis.*

On repeated occasions, within the last eight years, I have called the attention of the class to the presenting coincidence of a short incubation (so called) of a well marked initial lesion and its situation in the near vicinity of the frænum. This locality (previously referred to, page 219) is notable as a point where the lymph canals come nearest to the surface, — in fact, according to Ballieff, “to a point *just* underlying the epithelium.”

In the absence of any other satisfactory explanation, the conclusion appears to me inevitable that the syphilitic cell accumulation progresses in all directions, as has been proven, until an entrance of the vitiated cells into a lymphatic vessel is effected. The nidus of induration once formed, during this delay, may, under certain conditions, continue to increase, or it may remain stationary for a definite period; or, on the other hand, through the ordinary processes of tissue metamorphosis, it may soon disappear. Thus the varying interval between inoculation of syphilis and the appearance of the induration may be reasonably accounted for by the distance of the inoculated surface from the nearest lymphatic vessel, as the accumulation must necessarily progress until such vessel is reached. This distance is known to differ greatly in different localities. It is interesting to note a clinical fact, which I have often observed, namely, that indurations of the initial lesion at the frænum and glans, posterior to the meatus, are uniformly small in extent. In the prepuce, on the contrary, where, according to the researches of Dr. Isidor Neumann,¹ the lymphatics are much more deeply located, we find indurations more extensive. These vessels are represented as still more deeply seated in the base and body of the glans. These are also the known localities of occasional extensive indurations, while in the integument of the penis, where the lymphatic distribution is very superficial, forming loops near the apex of each papilla cutis, we have the most common occurrence of that thin induration which is termed the *parchment induration*.

Again, on the integument also, we meet most frequently the initial

¹ *Zur Kenntnis der Lymphgefäße der Haut — Mittheilung an den Sitzungsber. Wien.* 1873, Taf. viii

lesion as a small indurated papule, much resembling the indurated papule of a later syphilitic manifestation (secondary papular eruption), which, as it will hereafter be shown, is always associated with the lymph vessel of a papilla cutis. It is unfortunate that, in the large number of cases reported by authors to illustrate variations in the so-called period of incubation, the locality of the lesion should in no case have been reported. For, while various constitutional influences *may* be potent to cause variations in the interval between inoculation and induration, as well as in the amount and quality of the induration, the relative position of the surface of inoculation in regard to the nearest lymph canal, through which the vitiated cells are known to be carried directly to the nearest lymphatic gland, must be accepted as an important element in determining variations in date of appearance, as well as quality and amount of induration.

The continuance of the induration varies as much in different individuals as its amount. In cases like the one now under consideration, where it is extensive and characteristic, it may remain more or less salient for months. The same is also true of the indurated papule, even when no larger than a pea. The development of the newly deposited cells into connective tissue fibres, to a greater or less extent (as claimed by Biesiadecki), may be reasonably held responsible for the exceeding density and prolonged duration in such cases.

In his description of the progress of his case, you will recall the statement of our patient that about a month since he "noticed some lumps" in his groins. With the remembrance of examinations in previous cases, this does not surprise us. The inguinal glands in each of these were found enlarged and indurated, movable, painless, *evidently not the subject of inflammatory action*. Here, also, as I press upon the "lumps" referred to, I find them to be enlarged and indurated inguinal glands, painless also, and movable. There are no appreciable attachments to the surrounding tissues, although the patient has been conscious of their presence for more than a month, and we can believe that they have been enlarged for a much longer time. No pain; not the least evidence of inflammatory action any more than in the initial lesion. If we remove and examine a gland so enlarged and associated with the characteristic initial lesion of syphilis, we shall find it packed with cells similar to those we find in the indurated tissue of the initial lesion.

In Case II. you will remember that I directed attention to an enlarged lymphatic vessel, evidently connecting the indurated initial lesion with a similarly enlarged lymphatic gland. This, though not appreciable in all cases, may be recognized with sufficient frequency and certainty to indicate, beyond doubt, the channels through which the infective process is transmitted to the glands thus connected with the initial lesion.

It has been noticed that all lymphatic glands adjacent to a syphilitic initial lesion are not the subject of abnormal cell accumulation; only those in direct connection by lymph canals are involved. Those in the inguinal region corresponding to the locality of the initial lesion are usually the first to enlarge, yet the reverse is sometimes the case. This may be readily explained by the frequent crossings of lymphatic vessels on the *dorsum penis*. In the present instance there appear to be nearly a dozen enlarged and indurated glands, in either groin, varying in size from one half to one eighth inch in diameter. Such glands never suppurate except under prolonged external irritation in connection with a highly scrofulous diathesis. This is still another proof of the non-inflammatory nature of syphilitic cell accumulations. It would be very natural for you, at this point, to ask for an explanation of the causes which determine the direction of the infective processes of syphilis in the line of the lymphatic channels. For this we must revert to the nature of the infection, as claimed, through an incorporation of the degraded germinal cell (disease germ) into the substance of the white blood cell, *and its proliferation with this cell*. Stimulated in this manner to unhealthy activity, cell proliferation would appear to be capable of producing the abnormal cell accumulations which we have thus far found characteristic of the progress of the syphilitic infection; and, beside this, we have no other way of accounting for them. Why it does not combine with and infect the red blood corpuscle, and at once enter the general blood current, would seem to be accounted for by the fact (claimed by Beale, especially) that the red corpuscle is *formed material*, and hence the disease germ cannot combine with and become incorporated into its substance, nor subsequently undergo the rapid proliferation which is necessary to the generation and accumulation of the vitiated cells, *the essential product of syphilitic action*. This is, however, fully within the province and power of the white blood corpuscle, as already described to you (page 217) in a previous lecture. Again, the lymphatic vessels are the *natural channels* of the embryonal or white blood cells. Every surface of abrasion or inoculation may be said to be in direct communication with a lymphatic gland, not with an open blood-vessel.

The current of the fluids which everywhere permeate the tissues is not in the direction of the blood-vessels, but of the lymphatics, and thus we can understand why the progress of the syphilitic infection physiologically considered should be just as we have found it clinically, — not penetrating, pervading the tissues instantaneously, at the moment of inoculation and in defiance of all natural laws, but progressing slowly, certainly, physiologically, from the surface of inoculation through the contiguous and pervious lymph spaces into the lymph channel nearest,

and thence directly into the substance of the lymphatic gland with which it has direct connection.

Thus far, then, as you have seen, we have syphilis as a purely local disease. No evidence of it has been observed in the blood up to the time of its appearance in the glands. I challenge history to produce a single proven instance where syphilis has been demonstrated in the blood *before* the enlargement of the lymphatic glands in direct connection with the surface of inoculation, *or for several weeks after*. For the infective process, after reaching the gland thus in connection, in order to pass through it, must follow the intricate windings of the lymph current, through the gland substance, more or less obstructed, by the same or similar influences which delayed the entrance of the infected cells into the lymph canal nearest the point of inoculation.

It is a well-recognized clinical fact that not a single evidence of constitutional syphilis is ever present until after a period of *at least twenty-five days* after the occurrence of the induration and local gland enlargement. The average, as stated by numerous accepted authorities, is *over forty days*. If it is present at any point other than that included between the initial lesion and the glands in immediate connection, we seek in vain for the evidence of it. Such evidence cannot be produced from any reliable clinical records of the disease, nor from the results of any reported experimental inoculations.

This period, during which the diseased elements are making their toilsome way through the channels of the lymphatic glands (citadels established by nature to protect the general blood current from noxious invasion), has been termed *a second incubation*.

You have seen what the first incubation has been proven, namely, a *gradual cell growth and accumulation*. In the same way is the second apparent interval an incubation. When the gland channels have been fully traversed by the vitiated cells, and they, still following the lymph current through, possibly, still other intervening glands, have been carried into the *receptaculum chyli*, and from thence ushered through the subclavian veins into the general blood current, then, *and not until then*, may it be reasonably claimed that the disease has lost its local character, and has become in a strict sense a constitutional disease.

The period of purely local action, namely, that which precedes the entrance of the infective syphilitic material into the general blood current, may, it appears to me, be appropriately termed the Initiatory Period of Syphilis.

WOUNDS OF THE KNEE-JOINT.

BY ALFRED BOSMER, M. D.

"Wounds made into the cavities of large joints are the most dangerous of those affecting the body almost in any instance." — ASHLEY COOPER, 1818.

"When a large joint is opened, even by a small incised or punctured wound, there is great danger lest such extensive local mischief and constitutional disturbance ensue as to lead to the destruction of the articulation, with loss of the patient's life." — LARSEN, 1857.

"The opening of the synovial sac, with escape of synovia, even if the wound be not large, is always a severe injury, often interfering with the function of the joint, and not unfrequently dangerous to life." — BILLROTH, 1877.

CASE I. A farmer's son, twelve years old, while chopping wood, made a button-hole in the synovial membrane of the left knee, outside of and a little below the patella. The opening easily admitted the tip of the forefinger. The wound, a clean one, was closed with sutures, a compress moistened with cold water was applied, and absolute rest was enjoined. No trouble of any importance, local or general, followed; within a reasonable time perfect recovery took place. The boy now has no reason to regret the carelessness with which he inflicted upon himself the wound.

CASE II. A carpenter, of good constitution and habits, in the fourth decade of life, while at work one summer's afternoon upon the roof of a building, by the careless use of a shingling hatchet opened one of his knee-joints. He knew nothing of surgical traditions, and his courageous philosophy enabled him to look with contempt upon any casualty incident to his trade, which apparently left only an incision of moderate length in the skin. He completed the work of the day as if nothing had happened. But before going to bed there occurred to him the propriety of having some professional assistance.

The clothing, which was thick and heavy, was extensively saturated with synovial fluid. The hæmorrhage had been slight, although the wound was quite a long one. The plan of treatment proposed will readily suggest itself. The patient cheerfully accepted everything advised, excepting the injunction to keep still. The second day afterward he returned to his labor, in spite of my protest, and lost no more time. Convalescence was uninterrupted, and the recovery of the knee was complete.

CASE III. A boy, twelve years old, while playing with a hatchet, inflicted a short wound over the internal condyle of the right knee. He at once walked a large fraction of a mile in search of his mother. She returned with him, and resorted to the methods which are in accord with the principles of domestic medicine. I was not called until the early part of the second week. There were then well-marked constitutional symptoms. The limb was much swollen from the groin to the

toes, and was hot and tender. The joint was distended with a well-marked effusion, and was also the seat of considerable pain. Being satisfied that the original wound had penetrated the cavity of the knee, I at once reopened and enlarged it, and also made a second opening on the opposite side over the external condyle. A sero-purulent fluid escaped. This was the starting-point of a convalescence which advanced in a most satisfactory way, and terminated in complete recovery, leaving the joint just as good as ever.

In this case we undoubtedly had what surgical writers have accepted as a condition of safety, namely, the immediate closing by adhesion of the aperture in the synovial membrane; yet that process did not avert an inflammatory action. When the patient came to my hands his danger lay in the fact that he did not have an incision that penetrated into the cavity of his knee.

CASE IV. A man somewhat over thirty years of age came several miles to consult me at my office. His antecedents in respect of sanitary conditions and morbid processes were not of the best. A few hours before he had penetrated his right knee-joint with the dull blade of an old pocket-knife, and a rough-looking instrument it was. He had seen no reason for discontinuing the use of the limb, and acted accordingly. The joint was somewhat swollen. By forcible flexion he could eject from the wound, in a stream of considerable size and force, synovial fluid, which in its quantity could be measured in teaspoonfuls. A silver wire suture was passed, and the usual directions and precautions were given. He thought that he could not release his knee from its accustomed work, and certainly did not very long. I saw the case but once. I am assured by a brother of the patient that no trouble followed the accident.

CASE V. A young man, not of a healthy family, while working at his trade wounded himself with a chisel. Two and a half centimetres above the upper margin of the patella was a transverse cut four centimetres long externally, and in its deep portion making an opening somewhat shorter into the knee-joint. The wound was closed with metallic sutures, and rest in bed faithfully maintained. There followed a moderate effusion into the joint, but this was not of many days' duration. The only constitutional disturbance was, on the third day, an elevation of the temperature to 100° F. The amount of discomfort referred to the knee was trifling, and everything proceeded in a most satisfactory manner.

CASE VI. To the foregoing series I might add one taken from the veterinary branch of our art. A colt, three years old, when running loose in an inclosure, was suddenly found to be lame. Marked swelling of one knee, as it is called, attracted attention, and led to the discovery of a puncture, which entered the cavity of the joint. No particular trouble ensued; the limb was very soon as good as ever.

These cases occurred in a country practice, and make up the sum of the writer's experience in injuries of this kind. He has never happened to meet an instance of disastrous termination. Some of the cases here reported were treated before the value of carbolic assistance was generally known; before the precepts of Lister had explained and enforced the importance of the antiseptic idea, and had defined for it an efficient method of application. No one of them was managed upon a strictly antiseptic plan, but they all did well simply because there did not occur in them that bad quality and dangerous tendency with which such wounds are commonly accredited, rightly or wrongly. The results obtained are in striking contrast with the doctrines of those authorities whom I have quoted.

RECENT PROGRESS IN OPHTHALMOLOGY.

BY O. F. WADSWORTH, M. D.

Eserine and Atropine in Glaucoma. — The experience of various oculists in the use of eserine, as brought out in the debate on glaucoma at the meeting of the Heidelberg society¹ is of interest. Schweigger warned against its too free use, since it might easily excite iritis. Laqueur had found it effective in cutting short light attacks of acute glaucoma, or in the prodromal attacks. Its efficacy in more severe attacks appeared doubtful, but it is of use in producing, by contraction of the pupil, a condition more favorable for the performance of iridectomy. In glaucoma simplex its action is not to be relied on. The opinion that it causes decrease of tension in the anterior chamber through pressure backward by the iris,² or that which refers this effect to the freeing of adhesions at the periphery of the iris,² is negatived by the fact that, in certain cases, the tension is diminished, the arterial pulse ceases, before the pupil begins to contract. Follicular catarrh of the conjunctiva is sometimes excited by prolonged use of eserine, of like character to that occasionally produced by atropine. Cohn believed it of value in enabling the postponement of operation for a day or two in acute cases; in a chronic case, where there were reasons to prevent operation, he had employed it for a year, but the field had continued to narrow, the vision to decrease. Pflüger had found by the tonometer, in a case of glaucoma simplex with intermittent inflammation, tension increased twenty minutes after the use of eserine. Knapp, in one case of acute glaucoma, had relieved the attack by eserine, and had no return at the end of five months; in other acute cases the good effect was only temporary. In subacute glaucoma the effect was uncertain, in chronic either negative or positively harmful; in one such case it brought on

¹ Berichte ueber die 11te Versammlung der ophthal. Ges., Heidelberg, 1878.

² JOURNAL, vol. xvi., pages 528, 529.

an acute attack. He had also observed its tendency to produce iritis, and used it therefore with much caution, or not at all, as a preparation for iridectomy. He had been obliged to employ atropine soon after iridectomy, to release adhesions which had been caused by eserine.

With reference to the reputed influence of atropine to excite an acute attack in eyes predisposed to glaucoma, Schweigger stated that he had seen cases which might bear this interpretation, but regarded them only as coincidences. He had employed atropine experimentally to determine this question both in glaucoma simplex and between the attacks of inflammatory glaucoma, but had never succeeded in so causing the attack. In one such case atropine had been ordered over night, and in the morning the attack came on, but inquiry developed the fact that the atropine ordered had not been instilled. Förster and Dor believed atropine did arouse a predisposed eye to inflammation.

Thrombosis of the Vena Centralis of the Opticus. — Spontaneous thrombosis of the vena centralis Michel¹ believes to present well-defined and characteristic ophthalmoscopic appearances; in the course of three years he has observed seven cases, — five men, two women; in one case only were both eyes involved, but at an interval of about a year. The patients were generally between sixty and seventy years of age; the youngest was fifty-one. All presented a high degree of sclerosis of the peripheral arteries, and in several there was some hypertrophy of the right or left ventricle. The onset of the disease bears much resemblance to that of embolism of the central artery; it is always sudden, without prodromal symptoms and unaccompanied by subjective sensations; generally the loss of sight is first noticed on waking in the morning, but vision is never totally extinguished, and improves after the first, though it may be only temporarily. Michel distinguishes three grades of intensity of the affection, according as the thrombosis of the central vein is complete, incomplete, or slight. In the first the opticus and surrounding retina are seen diffusely overspread with blood, and the outline of the disc is wholly effaced, but there is no change of level. Within this diffuse bloody area, which extends around the opticus to a breadth of one to one and a half diameters of the disc, denser stripes of hæmorrhage are seen, corresponding to the distribution of the nerve fibres. Farther from the disc are numerous extravasations of the most varied form, size, and thickness. Upon the bloody area itself no vessels are visible; beyond it the arteries are very narrow; the veins are greatly enlarged, very winding, and quite dark in color, are here and there hidden by hæmorrhages, again bordered by a whitish stripe, or with their blood column narrowed by a whitish infiltration of the retina along their sides. In the macula there is seen early a whitish discoloration; a red spot in its centre appears to be a true hæmorrhage.

¹ Archiv für Ophthalmologie, xxiv, 2.

In the second grade the outlines of the disc are hidden by broad, striped hæmorrhages, which extend in all directions, but chiefly toward the macula. The veins are large, dark, and winding, the arteries faintly seen as thin threads; both can, however, be followed to their exit. The further changes resemble in diminished degree those of the first grade.

In the third grade there are few striated hæmorrhages at the edge of the disc, or denser ones covering a vein, but there is a remarkable disproportion between the size of the arteries and veins; the latter are larger, more tortuous, and darker than ever in choked disc. No change is found in the macula. That the thrombus is here in the central vein rather than in some of its branches is indicated by the nearly uniform venous dilatation. The result may be permanent complete closure of the vein, partial closure, or complete removal of the thrombus. In Michel's cases it seemed possible to assume the latter eventuality only when the thrombus had been small. With complete closure the hæmorrhages are at first partially absorbed, the opticus becomes more visible, and the arteries and veins may be followed farther toward the disc, but soon and repeatedly new extravasations occur, with farther depression of vision. The retina becomes more opaque, the vitreous turbid, whitish folds or threads are seen stretching across the fundus, and vision is almost wholly extinguished.

In the second grade, also, fresh hæmorrhages follow a fuller condition of the arteries, with renewed visual disturbance; but gradually the hæmorrhages are in part absorbed, in part take on a yellowish-white color; the space between opticus and macula is dotted with yellowish-white points, the macula region grayish-white, the disc less indistinct. The veins remain large, dark, and tortuous, and disappear suddenly here and there beneath elevations of the retina. The vitreous becomes hazy. Still, vision improved in one such case from counting fingers at 6 to V 4.

In the third grade the hæmorrhages disappear; the outline of the disc becomes sharp, but it assumes a whitish tint, as of atrophy, and careful examination yet reveals a disproportion in size between arteries and veins, while vision remains moderately impaired.

In one case, presenting clinically a type of the first grade, there was found an organized thrombus filling the vena centralis shortly before its emergence from the opticus into the orbit, hæmorrhages and results of hæmorrhages in the retina, atrophy of the nerve fibres and ganglion cells, proliferation of the radial fibres of the retina, development of blood-vessels and membranes in the vitreous. Considering the character of the changes in the circulatory system, that the condition of the arterial walls was such as to offer obstruction to the free flow of blood, it may properly be assumed that the thrombosis was spontaneous, the clot forming where a bend in the vein caused a slightly increased im-

pediment to the current, that is, at its exit from the opticus into the orbit.

In striking contrast to the cases described by Michel are two cases of thrombosis of the vena centralis reported by Angelucci.¹ The first patient, a man of twenty-three years, noticed while at work blindness of his left eye. Two months later he entered the hospital, when insufficiency of the aortic, and insufficiency and stenosis of the mitral valves were discovered. Examination of the blind eye showed the media clear, the disc whitish and somewhat irregular in outline, the arteries narrow, the veins moderately enlarged and winding; no hæmorrhages. In the other eye vision was good; there was slight enlargement of the veins, and one small hæmorrhage on the disc. No further changes took place till death, three weeks later. The microscope discovered in the blind eye evidence of atrophy of disc and opticus; no trace of hæmorrhage in the retina. There was marked periphlebitis of the vena centralis, and a thrombus close behind the lamina cribrosa completely closed it. The central artery was compressed at this point, as it seemed, rather by the thickening of the wall of the vein than by the thrombus. In the right eye was also phlebitis and periphlebitis of the vena centralis, but nowhere so far advanced as in the left, nowhere involving the whole circumference of the vessel. The other organs presented the pathological changes usual with valvular disease of the heart. In the kidneys and in patches of softening in the cerebral hemispheres phlebitis and endarteritis of the small vessels.

The second case was very similar. A woman of twenty-four years, with acute rheumatism and insufficiency of the mitral valve, lost the sight of the left eye during the night. Examination showed total blindness of this eye, the arteries narrow, and in places apparently empty. But on the next day the irregularity in the blood column had disappeared; the disc was somewhat veiled. Nothing else abnormal was seen. Death two months later. Here again was thrombus completely plugging the vena centralis, periphlebitis of the vein, and compression of the central artery.

In both these cases the patients were young, the occurrence of blindness sudden and complete. Though there was disturbance of the circulation from the heart disease, no atheroma or pronounced sclerosis of the arteries existed. The demonstration in the first case of periphlebitis also of the vein in the right eye, without thrombus, and in the second case of periphlebitis of other parts of the vein than that which was plugged, is strong evidence that the thrombosis was secondary to the affection of the wall of the vein. Whether the absence of extensive extravasations, such as Michel's cases presented, was owing to the different method of production of the thrombosis *per se*, to the possibly

¹ Monatsblätter für Augenheilkunde, October, 1878.

simultaneous compression of the arteria centralis, or to the lack of pathological changes in the arteries, is not easily to be decided.

Diagnosis of Intra-Ocular Tumor by Probing. — Fraenkel¹ observed in the eye of a girl of sixteen an elevation of the retina, which extended in the form of a grayish fold from the optic disc downward and inward, till its anterior end was lost to view. On each side of this elevation was a shallow separation of the retina. The central fold near the disc was little wider than the latter, but gradually doubled in width as it ran forward; it showed no movement. The media were clear; central vision = 1; a defect in the field corresponding to the separation. During six weeks' observation the only change consisted in an increase of prominence of the fold. To decide if a solid growth were present, a cataract needle was passed into the eye six mm. to the outer side of the cornea, and directed by help of the ophthalmoscope through the vitreous toward the fold. Sudden clouding of the cornea, probably produced by pressure or dragging, caused failure of the first attempt, but a second, two weeks later, was successful, and the operator could satisfy himself, both by touch and sight, that the grayish ridge offered firm resistance to the needle, and could even feel along one side of the growth. The eye was enucleated, and a gliomatous development between the layers of the retina found which reached from the disc to the ora serrata in the form of a narrow band, widening toward its anterior extremity, and projecting one and one half to two mm. into the vitreous.

The Optical Constants of the Eye. — Reuss² made careful measurements of the curves of the cornea and lens and the distance of the surfaces of the lens from the cornea in twenty-one eyes. From the results of these measurements and the calculations based on them he draws the following deductions: —

(1.) The dioptric apparatus of two eyes of the same refraction may be very different, whether the eyes be emmetropic or in high degree ametropic.

(2.) This difference does not depend only upon a difference in the curve of the cornea, but equally upon varying refractive power in the lens.

(3.) The depth of the anterior chamber is in general less than previous measurements have shown; it is not always of the same depth in emmetropes, and in myopes bears no direct relation to the amount of the myopia.

(4.) The distance of the posterior pole of the lens from the summit of the cornea is less than has been assumed.

(5.) Emmetropic eyes have a longer axis, a shallower anterior cham-

¹ Centralblatt für practische Augenheilkunde, December, 1878.

² Archiv für Ophthalmologie, xxiii. 4.

ber, and a lens of much greater focal distance than hitherto supposed. The newer values of the schematic eye of Listing-Helmholtz are therefore still too small.

(6.) In myopic eyes the radius of the anterior surface of the lens is, as a rule, much greater than in emmetropia, and the same is in general true as to the posterior surface of the lens. In correspondence with this the focal distance of the lens is almost without exception greater in myopes than in emmetropes. Among the eyes measured was none in which an excess of focal power in the lens was the cause of myopia.

(7.) The thickness of the lens in myopes is, with few exceptions, less than in emmetropes.

(8.) The principal focal distances of the eye average to be greater in myopes.

(9.) In most myopes both nodal points lie behind the lens, or at least the anterior nodal point lies very near the posterior surface of the lens.

Horstmann¹ measured the depth of the anterior chamber in forty-one eyes by means of an instrument contrived by Donders. He found the depth to be less than that given by nearly all previous observers, but his results agreed very nearly with those of Reuss. The depth varied in eyes of the same refraction, while the average depth was greatest in myopic, least in hypermetropic eyes.

PROCEEDINGS OF THE NEW YORK COUNTY MEDICAL SOCIETY.

MARCH 24TH. *Laryngeal Phthisis*. — Dr. Frank H. Bosworth read a paper on Laryngeal Phthisis, in which he maintained the non-tubercular character of the affection, but regarded impaired vitality as the most important element in its causation. He considered the appearances always noted in the first of its three stages as pathognomonic of the disorder, and believed that it was curable in the majority of instances when recognized sufficiently early. Even when in the stage of ulceration he thought many cases could be cured, although chronic laryngeal catarrh was apt to remain. He divided the treatment into four procedures: (1.) Thorough cleansing of the parts, preparatory to other measures. (2.) The application of mild astringents, alterants, etc. (3.) Anodyne applications to relieve the pain and irritation sometimes caused by the latter. (4.) The use of iodoform as a specific in the ulcerative stage. Dr. Bosworth thought the applications could be most satisfactorily made by means the Sass spray, and occasionally in the form of powder by the insufflator. The steam atomizer he condemned in this as in all other chronic affections of the throat. — Dr. Flint stated that he had always been accustomed to regard the prognosis as bad in laryngeal phthisis, and Dr. Lincoln said that although a certain proportion of cases were curable under appropriate treatment, he

¹ Bericht der ophthalmologischen Gesellschaft, Heidelberg, 1878.

could not agree with Dr. Bosworth in his statement that this was the case in a majority of instances. — Drs. Beverly Robinson and Andrew H. Smith spoke in favor of tracheotomy, which the author of the paper had advocated in cases where the other measures recommended failed to be of service; but the latter urged great caution in the procedure, as he believed that fatal catarrhal pneumonia was more or less likely to occur after the operation. After expressions of opinion by two or three other members, Dr. Bosworth brought the discussion to a close, and in the course of his remarks mentioned incidentally that although the most of his patients had been cured of laryngeal phthisis, nearly all of them had subsequently died of pulmonary disease.

Abuse of Medical Charities. — Dr. F. R. Sturgis read a paper on The Responsibility of the Medical Profession for the Abuses of Medical Charities, which had been presented at the recent meeting of the State Medical Society, and was by it referred to the county societies for consideration. In consequence of the lateness of the hour, the discussion of this paper was made the order of a special meeting of the society to be held April 14th.

Metric System. — The same evening was adopted the report of the committee on the metric system, whose recommendations were embodied in a series of resolutions to the effect that the system shall henceforth be used in the minutes of this society and in all the papers published under its authority; that the society request the medical boards of the New York hospitals and dispensaries to adopt the system in prescribing; that the faculties of the medical colleges in the city be also requested to order its adoption in their didactic and clinical departments; and that the Medical Society of Kings County (Brooklyn) be invited to coöperate with it in the means of insuring rapid and safe transition from the old to the new system of weights and measures.

FERRIER ON THE LOCALIZATION OF CEREBRAL DISEASE.¹

THE name of Dr. Ferrier has already been long known to the medical public as the author of *The Functions of the Brain*, and these lectures, which appeared first in the English journals a year ago, were looked for with much interest, as promising to give the last clinical word about a subject on which the writer, by his experimental researches, had earned a right to speak with authority.

There is no reason to be disappointed as to the manner in which this expectation has been met. The work throughout deserves the highest praise. The reasoning is clear and fair, and the materials have evidently been collected with industry and discrimination. The turning-point of the book is of course an attempt to account, on physiological principles, for the symptoms observed clinically in cases of destruction or irritation of the so-called "motor" and "sensory" centres, recently discovered in the convolutions adjacent to the fissure of Rolando, and elsewhere; in other words, to establish the *cortical paralyses*, etc., on a firm basis.

¹ *The Localization of Cerebral Disease.* [Soulstonian Lectures for 1878.] By DAVID FERRIER, M. D., F. R. S., etc. New York: G. P. Putnam's Sons. 1879. Pp. 142.

It is highly satisfactory, in view of the heterogeneous mass of apparently contradictory testimony with which Dr. Brown-Séquard has identified his name of late, to hear from Dr. Ferrier (page 49): "It is not maintained, however, that in all cases of purely cortical paralysis anatomical lesions are demonstrable in these centres; but I am unable, after much investigation, to find any satisfactory evidence of a destructive lesion here, not associated with motor paralysis." The famous "crow-bar" case has sometimes been brought forward as a piece of adverse evidence of this kind, but it is probable that the convulsions referred to in reality escaped injury. For the analysis of the evidence showing the probable position in man of the special "motor centres," we must refer the reader to the original essay. If the conclusions based thereon are justified, as is now almost universally believed, we may have in man complete paralysis either involving one entire half of the body, or limited to some of the movements of one member, from disease or injury confined to the cortex cerebri in the motor region referred to, and analogous disturbances of the special senses, from similar lesions in the more posterior portions of the cortex. Indeed, the hemiplegias of cortical origin are hardly, when fully developed, to be distinguished from those due to lesions of the deeper-lying parts.

The existence of other diseases (meningitis, etc.), and the mode of onset of the attack may help to a diagnosis. Thus we read (page 98), "Hemiplegia, complete from the first and permanent, is not, however, the most common type of paralysis depending on lesion of the cortex or subjacent medullary fibres. More frequently, paralysis of cortical origin is . . . a succession of dissociated paralyses or monoplegiæ. In cortical affections we frequently find a hemiplegia, at first complete, resolving itself into a monoplegia, or a monoplegia becoming a hemiplegia by progressive advance of the disease to other centres. . . . Monoplegia is very often associated with monospasm, or early rigidity of the paralyzed limb. . . . Cortical paralysis is frequently erratic and transitory, more especially in connection with superficial or meningo-encephalitis, — appearing and then vanishing, first on one side and then on the other." "According as the lesion is superficial, or invading the whole depth of the cortex and subjacent medulla, we get transitory paralysis, or a paralysis which remains permanent and is followed by descending sclerosis and late rigidity," etc.

Additional evidence is brought to show that *epilepsy* (a name which, as Hughlings Jackson long ago pointed out, should be taken to indicate a *pathological condition* in which ganglionic matter anywhere may be found, and not the lesion of a certain organ, as the medulla oblongata) is often due to irritative lesions in the motor area of the cortex.

No extended attempt is made to analyze the functions of the so-called "centres" from the psychological stand-point, though what is said seems to us sound and interesting. We object, however, to the view, which is sanctioned not directly, but by implication, as to the significance of the movements induced by electrical excitation of the brain.

It is claimed that by this mode of experimentation we can study the localization of functions in the cortex cerebri, but it is plain that unless it is assumed that these movements are such as are characteristic of the conscious,

volitional life of the animal, they can give us only a very limited information as to what are generally believed to be the most important of the cortical functions.

It will be rejoined that the information given by the electrical experiments is both supplemented and corroborated by the testimony of the results (localized paralyses) of destructive lesions of the cortex. But even if this were entirely true (and it must be confessed that the testimony borne by the clinical observation is not always as explicit and satisfactory as could be wished), still we maintain that by thus allowing *one* of the functions of a very sizable portion of the cortex (the power to initiate simple fundamental movements) to stand as its representative function, an important source of error is introduced into the discussion.

Have, then, these movements any peculiarity which stamps them as of volitional type? It is easy to reason that, since all thought is made up of motor and sensitive elements, and since it must be in the cortex cerebri as the supreme ganglionic centre that these component elements of thought are constructed, therefore all manifestations of activity which we get from acting on the cortex in the physiological laboratory must be such as, occurring in the life of the individual, were characteristic of his conscious existence. This reasoning is not distinctly gone through, we repeat, only implied, and it is indeed now generally believed that the cortex cerebri has to do with secretion, nutrition, vaso-motor action, and perhaps all the processes of vegetative life. Still, the implication, even, that the simple muscular movements which we get by applying electricity to the cortex cerebri are of a volitional type deserves, in the interests of psychology, to be met and questioned.

If such were the case, how should we explain the fact that it is found to be impossible, experimentally, to excite any play of motions such as might suggest, in the faintest degree, by their variety or number, the voluntary movements of a healthy animal? The first inclination is to suppose that this small and invariable circle of movements represents the average, so to speak, of the infinite number which each centre may take part in producing, in the sense in which Dr. Hughlings Jackson speaks of the tonic spasms of epilepsy as being made up of a great number of coördinated movements of high order "jammed together" so as to be individually indistinguishable. It is plain, however, that this analogy cannot be applied exactly to the case of experimental excitations of the cortex, since we see here no evidence of a conflict of muscular contractions, but orderly, unembarrassed, though not very complex motions, which recur always under essentially the same form. It may be that the reason we always get these particular movements, instead of any one of a large number, is that, in virtue of the frequency with which, physiologically, they occur, the processes underlying them come to have a greater susceptibility to excitations than the processes underlying other movements less frequently performed. But it must be remembered that this very fact would constitute a reason for classifying these processes among the (relatively) non-volitional.

In the second place, we know far too little of the anatomy and physiology of the cortex cerebri to regard it as being, *as a whole*, a volitional ganglionic centre, or as a single centre, at all. For all we can tell, the different layers of

the cortex may have functions almost, if not quite, as distinct from each other as are those of the thalamus opticus and the corpus striatum.

In the third place, the evidence that we should regard as essential to prove a movement to be of volitional or psychical type, namely, the fact of its association with other psychical events, such as sensations or other movements, we get in these experiments, somewhat, it is true (at least in the case of excitation of the sensory centres), but only very sparingly.

We do not mean to deny that *lesions* of the cortex in the neighborhoods indicated cause what might be called psycho-motor paralyses, as in aphasia, for example, but we maintain that in these pathological lesions parts are injured and connections severed of whose functions the electrical-irritation experiments of Hitzig and Ferrier, brilliant as they are, have taught us really but little.

The purpose of this criticism is not to detract from the importance of these experiments, but to show how they might, by this very brilliancy, lead physiologists to be content with but partial results, in other words, to object to the *implied* opinion that in obtaining certain coördinated muscular contractions by excitation of definite points of the cortex, we obtain more than a faint suggestion of the essential function of the part.

The relation between the motor and the sensitive functions of the cortex cerebri might perhaps be symbolized to advantage by comparing them, *regarded from the physiological stand-point*, to two oblique cones, having a common base and diverging apices.

That portion of each cone which is common to both would represent the (psychological) region within which motion and sensation resign, in a measure, their individual characteristics to unite as the basis of thought.

The apex of the motor cone might represent the functions of the "motor centres" of Hitzig and Ferrier. But the essential and more numerous functions of the cortex, even that part anatomically included within these "centres," would be represented by the overlapping part of the cone, and the evidence is as yet very incomplete that the functions of this part can be studied through electrical excitation.

The recent valuable researches of Professor Munk of Berlin at once forestall and fortify this criticism in a measure.

According to them the so-called "motor region" of the cortex cerebri should rather be regarded as a region given up mainly to tactile perception, the movements being excited only indirectly, though, no doubt, through the medium of defined and specialized association-tracts.

While we take the liberty to doubt, on psychological grounds, the propriety of defining the functions of this — or perhaps of any — part of the cortex as purely sensory, it must be admitted that the views advanced by Munk are more broadly scientific than those of the ultra "localizationists," and so, perhaps, are also the views of those who hold, with Schiff, that the "motor-region" is the seat of the muscular sense.

J. J. P.

GEORGE B. WOOD, M. D., LL. D.

PROFESSOR GEORGE B. WOOD, whose name for more than half a century has been connected with medical teaching and medical literature, died on the 30th of March, 1879, at his residence in Philadelphia, having just completed his eighty-second year. A native of Greenwich, New Jersey, he was educated at the University of Pennsylvania, from which he received his medical degree in 1818. Four years later he became professor of chemistry in the Philadelphia College of Pharmacy, and in 1821 took the chair of *materia medica* in the same institution, which he resigned in 1835 to accept the same branch in the medical department of the University of Pennsylvania. In 1850, having been continuously connected with the latter institution in the position mentioned, he was elected professor of the theory and practice of medicine in the same school, and upon his resigning, in 1860, he was unanimously appointed emeritus professor of the theory and practice of medicine. In 1863 he was made a member of the board of trustees of the university, and in 1865 he instituted and endowed the summer school with an auxiliary faculty,¹ authorized to confer the degree of doctor of philosophy.

He was physician to the Pennsylvania Hospital for twenty-four years (1835-59), and was a member of the faculty of the University of Pennsylvania for about the same period. At the time of his death he was president of the College of Physicians of Philadelphia, and president of the American Philosophical Society. He was a member of a number of other societies, and had been president of the American Medical Association. During the last four years he had been an invalid and confined to his house, the last two years being unable to leave his couch.

The industry and zeal of Dr. Wood were such as to lead him, in former years, to contribute frequently to medical literature, but his reputation as a writer is chiefly based upon his *Treatise on Practice*, published in 1847, which ran through six editions, the last being in 1867. Previous to this work, however, he had, with the late Dr. Bache, compiled the *Dispensatory of the United States*, which first appeared in 1833, and is still extant, thirteen editions having been published. He also wrote a *Treatise on Therapeutics and Pharmacology or Materia Medica* (Philadelphia, 1856), and a number of addresses, including a short History of the Pennsylvania Hospital and one of the University of Pennsylvania.

The career of Professor Wood exemplifies in a striking manner the legitimate results of honest, earnest, persevering endeavor when associated with uprightness of character and unwavering integrity. Until the last, he preserved a warm interest in medical education, and by his death the University of Pennsylvania loses a warm and unselfish friend, and the profession of Philadelphia one of its brightest ornaments. He lived to see the maturity of many of his plans, and to enjoy the reward of his devotion to his chosen profession and to humanity.

¹ The following were the chairs occupied in the summer school: (1) zoölogy and comparative anatomy, (2) botany, (3) geology and mineralogy, (4) hygiene, and (5) medical jurisprudence.

YELLOW FEVER ON THE PLYMOUTH.

THE bill authorizing the expenditure of two hundred thousand dollars in the construction of a steel refrigerating ship, according to the plan proposed by Professor Gamgee, passed the senate after some discussion, and so modified as to make its construction subject to the recommendations of the National Board of Health. Professor Gamgee proposes this as a steam vessel, to be used at the quarantine of such ports as may be recommended, to disinfect vessels and cargoes from ports suspected of infection with yellow fever and other contagious diseases. During the discussion a communication was read from Drs. Turner, Billings, and Hamilton, to the effect that the apparatus will give a probable temperature of zero F. to affect an empty ship throughout, but that it will probably almost always be necessary to discharge the cargo first; that the assumption that this temperature of a few hours' duration will destroy or render permanently harmless the yellow-fever poison has no facts as yet to sustain it; and that the project is an experiment worthy of trial.

The recent outbreak of yellow fever on board the United States ship *Plymouth* will render this proposition of Professor Gamgee's peculiarly interesting, and retard legislation upon his bill in the house of representatives until a full report has been made by the secretary of the navy. Upon the facts in the case, as called for by the house, resolution passed April 8th. The secretary has appointed Drs. Wm. T. Hord, Richard C. Dean, and Thos. W. Leach as a board to make a thorough investigation and report. The surgeon-general of the United States navy has furnished to the surgeon-general of the marine hospital service the following facts:—

On November 7th last four cases of yellow fever occurred on board the vessel while lying in the harbor of Santa Cruz; these were removed to the hospital on shore, and the ship sailed for Norfolk. Three mild cases occurred during the voyage, and the *Plymouth* was ordered to Portsmouth, N. H.; thence to Boston. At the latter port everything was removed from the ship, and all parts of the interior were freely exposed to a temperature which frequently fell below zero, the exposure continuing for more than a month. During this time the water in the tanks, bilges, and in vessels placed in the store-rooms was frozen. One hundred pounds of sulphur was burned below decks, this fumigation continuing for two days, and the berth decks, holds, and store-rooms were thoroughly white-washed. On March 15th the ship sailed from Boston southward; on the 19th, during a severe gale, the hatches had to be battened down and the berth deck became very close and damp. On the 23d two men showed decided symptoms of yellow fever, and on the recommendation of the surgeon the vessel was headed northward. The sick men were isolated, and measures adopted for improving the hygienic condition of the vessel and crew. The surgeon reported that he believed the infection to be confined to the hull of the ship, especially to the unsound wood about the berth deck, all the cases but one having occurred within a limited area; and that while the *Plymouth* is in good sanitary condition for service in temperate climates, should she be sent to a tropical station, probably no precautionary measures whatever would avail to prevent an outbreak of yellow fever.

POLITICAL EXPEDIENCY.

THE bill to consolidate the boards of health, lunacy, and charity has passed to its third reading. If the bill becomes a law, this means the virtual abolishment of the present Board of Health for political reasons, the republican party making this change in the name of retrenchment, but in reality as a campaign measure against the Butler faction. It is uncertain whether the present members of the board will be renominated by the governor, or that they will accept any such nomination. It is reported as probable that the consolidated board will have at least two female members. The valuable work which has been done by the present Board of Health and the influence it has exerted in improving sanitary legislation throughout the country are too well known to need any praise from us. It must be looked upon as a great misfortune that the usefulness of this organization should in any way be tampered with.

THE WALKING MANIA.

ONE of the saddest evidences of the difficulty in obtaining a livelihood at the present time is shown in the readiness with which dangerous occupations are embraced by a crowd of eager applicants when there is an opportunity to make money. We called attention to this fact some time since in commenting upon the death of a poor girl accidentally killed in a shooting exhibition upon the stage. The walking mania affords a more recent example. The exhibition of women pedestrians in New York was a ghastly caricature of the form of entertainment. The sufferings of these poor creatures in their efforts to obtain a share of the proceeds were apparently the chief point of interest to the spectators. The quarter-mile walk bases its success as a show on the amount of exhaustion it is capable of producing. In a recent six days' walk in Louisville it is stated that one of the contestants, a man, at the close of the match "was completely worn out," and, after languishing for a few days, died. We are glad to say that under the careful police supervision of this city such entertainments are not likely to take place here.

MEDICAL NOTES.

— Mathieu, the old and well-known instrument maker of Paris, is dead. — Professor Nussbaum, of Munich, has just performed his two hundredth ovariectomy. — Professor Michel, of Erlangen, has been called to Wurzburg. His former chair has since been taken by Professor Sattler, heretofore of Giessen. — Hyrtl has just published a work on anatomical terms which have been derived from the Arabic and Hebrew languages. The Vienna *Allgemeine medizinische Zeitung*, in commenting upon the exceeding interest of the work, expresses the greatest regret that a man of Hyrtl's genius could have withdrawn so prematurely from his professorship. — Professor Sonnenschein, one of the most accomplished chemists of Prussia, is dead. — Erichsen has

been nominated as president of the Royal Medical and Chirurgical Society. — Dr. Hermann Köhler, professor of pharmacology in the University of Halle and author of the Handbook of Physiological Therapeutics and *Materia Medica*, died of heart disease February 6th. He is not to be confounded with Reinhold Köhler, professor of clinical medicine at Tübingen and author of the excellent Handbook on Therapeutics. — Tyndall has contributed one thousand marks to the monument to the late Robert von Mayer, of the University of Tübingen.

— At Greenock, Scotland, an "articulation school for deaf and deaf-mutes" has been established under the auspices of Prof. Graham Bell, formerly connected with the Boston School of Oratory, and an assistant teacher has been sent out from the latter institution. The system is extremely interesting, consisting of articulation and lip-reading, which of course are taught through the eye of the pupil, and may be studied at the Boston school, at which visitors are always welcomed.

— Gibout, in *L'Année médicale*, gives such simple treatment for the universal torture — corns — that it should become familiar. He first softens the corn by applying to it for one night an ointment consisting of turpentine and acetate of copper each one part, white resin two parts, and yellow wax four. The corn should afterward be excised, care being taken to go deep enough to remove its summit, which of course is the portion deepest in the flesh. After excision the matrix should be cauterized with sulphuric acid, else the corn will reappear.

— The *London Lancet* severely denounces the "heathen practice" of burning the dead, chiefly because by destroying all traces of poison and internal injury it would encourage crime.

CHICAGO.

— Now that a democratic mayor has been elected, and the first change in the political complexion of the city government that has occurred for many years is about to be inaugurated, the future of the department of health is being canvassed by both the people at large and the profession. A petition is in circulation among citizens which is being extensively signed, praying the mayor elect not to disturb Dr. De Wolfe in his office of commissioner of health. The claim is made with great unanimity among all classes that the department of health should be kept out of politics, and conducted in the interest solely of science and the health of the people. While some people, both in and out of the profession, oppose the present commissioner, the great majority think he has given the city the most thorough and efficient health department we have ever had. His administration has certainly been a warfare upon the "stinks" of fertilizing establishments, and it is no wonder owners of such oppose his retention in office.

Mayor-elect Harrison gives, so far, evidence of broad views and a high public spirit; he says the police and fire departments shall not be disturbed by political influences; he is silent on the subject of the health department. Meanwhile the scramble for office is kept up with the vigor usually incident to a change of administration in a large city.

WASHINGTON.

—The final confirmation by the senate of Drs. Smith and Verdi as members of the National Board of Health enabled that body to hold a full meeting, with all its members present, excepting Dr. Bowditch, on April 2d, which resulted in the following election of officers: Dr. Jas. L. Cabell, president, Dr. J. S. Billings, vice-president; Dr. T. J. Turner, secretary; executive committee: Drs. Cabell, Billings, Turner, Smith, and Bailhache. The meetings were held continually for four days, when the board adjourned to meet May 1st at Atlanta, Ga. During their session they decided to appoint a commission to investigate personally the yellow fever in Cuba, and to act at an early date. They also agreed upon the provisions of a bill to promote the public health, and to prevent the introduction of contagious and infectious diseases, providing for a rigid quarantine, etc.; this bill being referred to the senate committee will probably receive discussion and modification before its final adoption, and its provisions have not yet been published.

—Senate bill No. 267, authorizing the National Board of Health to investigate and report upon infectious and contagious diseases in food animals, has been referred to the committee on agriculture, and no report has yet been made upon it.

—Senate bill 284 authorizes Wm. J. Wilson, assistant surgeon United States army, to receive from the Khedive of Egypt a decoration for gallantry in battle in the action near Gara, Abyssinia, March 7, 1876.

LETTER FROM ST. LOUIS.

Taxation of Physicians. — Prostitution. — Medical Education. — Arsenic in Tetanus.

MR. EDITOR, — One of the subjects that, during the past winter, has interested the medical fraternity in St. Louis has been an ordinance imposing a tax of twenty-five dollars a year, irrespective of income, upon the physicians practicing in the city. Meetings were held expostulating with the council, and petitions were addressed to the state legislature asking that they should interfere to prevent the enforcement or passage of such an ordinance. The ordinance was opposed by the profession on the ground that it was unjust to tax an occupation which included so large a proportion of charity work, and which by its charity saved the city so much expense. It was also opposed by some upon the ground that it was a tax upon brains. These arguments had no weight with the enlightened members of our city council; they held that the privilege of practicing medicine in St. Louis was worth twenty-five dollars a year. The state legislature, however, has passed a law prohibiting any city or town in Missouri from enacting any ordinance levying a yearly tax upon the professions of law, medicine, the ministry, or teaching. A protest has been made by the city authorities, claiming that the legislature has no right to make such a law, and that by so doing it infringes upon the rights of the city. Whether this objection is valid or not remains to be seen.

Yesterday a number of amendments to our city charter were submitted to

the people; among them was one for the regulation of houses of prostitution and assignation. It was couched in language which was suggestive only of good, but the idea prevailed that it was a wolf in sheep's clothing, and that regulate meant license. Only about one twelfth of the voters voted, but the result was 4700 for to 7000 against. It is to be hoped that some active measures will be taken against this vice or crime, whichever one may choose to call it. It is thought by many who are qualified to judge that our present laws are ample, and that the fault has been not with the laws but with those who executed them; for from the repeal of our social evil law until a few months ago there seems to have been no effort to suppress prostitution in this city.

The regular medical colleges have just held their commencement exercises, the Missouri College graduating eighty-seven and the St. Louis College fifty-eight students. The valedictory address to the graduates of the St. Louis Medical College was made by Dr. E. H. Gregory. That to the graduates of the Missouri Medical College was made by Dr. P. G. Robinson.

The three years' course of study is rapidly gaining popularity here; thirteen of the graduates of the St. Louis Medical College had taken the three years' course, which amounts to about nine months of actual attendance every year in that institution. At the end of the first year they have written examinations in chemistry and anatomy, at the end of the second in materia medica and physiology, and at the end of the third in the remaining studies; this course also includes a compulsory course of practical analytical chemistry in the laboratory. The favor with which this is received is evinced by the fact that during the first and second days that the books were open for matriculation between forty and fifty students gave in their names for the three years' course. This is a step in the right direction, and will undoubtedly tend to elevate the profession in the West.

At a recent meeting of our medical society Dr. J. T. Hodgen attracted the attention of its members to the treatment of tetanus by arsenic, a practice which he had followed for some years, and which had yielded better results in his hands than any other line of treatment. He begins with the usual dose, increasing it rapidly to as large an amount as the patient can bear.

The following are some of the cases treated in this manner, which were under his sole charge, or were seen by him in consultation: Case I. G. S., aged fifteen years. Contused wound of scalp. Trismus and opisthotonos. Spasms recurred frequently during a period of three weeks. Fowler's solution in five-drop doses every two hours. Over two ounces were taken. Recovery. Drs. A. S. Barnes and J. T. Hodgen. Case II. Boy, fourteen years old. Wound from nail in boot. Cauterized the wound freely; after trismus was present to a marked degree began the use of Fowler's solution in large doses. Recovery. Case III. C. C., seventeen years old. Trifling wound of knee. Trismus and opisthotonos. Chloral had been given, then Fowler's solution. He was removed to the City Hospital, and the arsenic continued. Recovery. Drs. Frazier and Hodgen. Case IV. Boy. Scald of both legs. Fowler's solution and chloral. Recovery. Drs. Fairbrother and Hodgen. Case V. J. D., forty years old. Fracture of left thigh, first and fourth metatarsal bones of left foot and left clavicle, with scalp wound. Trismus. Third day began to

take Fowler's solution; no other medicine was administered. Recovery. Case VI. Boy, fifteen years old. Gun-shot wound of left arm. Extreme opisthotonos and trismus. Arsenic. Recovery. Drs. Mudd and Green. Case VII. Man, thirty years old. Finger cut by a saw. Trismus; not a severe case. Arsenic was administered, and the case resulted in recovery. Dr. Mudd.

These are some of the cases treated by arsenic. All traumatic; all resulted in recovery. There have been, of course, fatal cases where arsenic has been used, but death has always occurred in the first thirty-six hours.

SHORT COMMUNICATIONS.

DR. WILLIAM F. STEVENS.

At a meeting of the Middlesex East District Medical Society, held at Woburn, April 2, 1879, the committee appointed to prepare proper resolutions on the death of the late Dr. William F. Stevens, of Stoneham, presented the following, which the society voted to accept, and authorized the secretary to send a copy to Mrs. Stevens, and to the Boston Medical and Surgical Journal for publication:—

TO MRS. DR. WILLIAM F. STEVENS, STONEHAM, MASS.

DEAR FRIEND,—The members of the Middlesex East District Society, along with many others, wish to condole with you in the great loss we have recently sustained in the death of Dr. Stevens. To the younger members of this society he was specially endeared by numerous acts of kindness and professional courtesy, and by all of us the loss will be severely felt in the future.

As physicians, we desire to put on record the opinion that no one ever surpassed him in a due regard for the rights of his fellow practitioners. His was indeed the soul of honor, "without fear and without reproach," who scorned to take an unfair advantage of a rival practitioner, and studied to save the feelings of others even at the sacrifice of his own.

We desire also to record our admiration of his great skill and remarkable fidelity to duty—a fidelity which knew neither rich nor poor, but only suffering humanity.

Nor will we soon forget the moral beauty of his character, which reflected its lustre on the profession to which we are proud to belong. It shall be our duty and privilege to "keep his memory green,"—an example for all time of what a good physician should be.

A true copy, attest: J. RICHMOND BARSS, *Secretary*.

BLOOD-CELL COUNTING.

MR. EDITOR,—I hope you will allow me to suggest to your readers some points in reference to instruments for blood counting, as some misapprehension may arise from a hasty reading of the article by Drs. Henry and Nancrede contained in the JOURNAL for April 10th. In the Malassez and Gowers patterns of instruments for blood counting it is proper to admit the existence, first, of errors of instrument, which affect comparative results. These may be unequal depth of cell or want of uniformity in the calibre of the capillary tube used as a cell, unequal ruling of lines, and also want of uniformity of the surface of their covering glasses. Second, of errors of method in the practical use of these instruments, which affect comparative results; these may arise from those errors which occur in experiments upon a single specimen of blood. The only important errors of this kind occur from an imperfect cleaning of the blood pipette; from the fact that the lumen of the tube may contain moisture, and that all the blood has not been blown from the blood pipette into the artificial serum; also, as stated by these writers, from gravitation of corpuscles contained in a drop too large for the cell.

The errors of the first class are those which in a well-made instrument are so trifling that they may be disregarded; those of the second are not so easy to avoid or calculate, but with

great care in manipulation it is fair, from experience, to place them within five per cent. The errors noted by Drs. Henry and Nancrede need not be insisted upon too strongly, because they can be avoided by great care and experience in manipulation.

Having, then, by careful experiments on standard solutions of blood discovered the error of the instrument and its method of practical use, we have a definite starting-point, and ground upon which to base the circumstances which may govern or cause any variations which are greater than this error. In the case of my experiments, reported in your number of April 3d, I found that this error did not exceed five per cent. I do not lose sight of the fact that there are circumstances in the individual upon whom the experiment is made which may affect the deductions as to the degree of corpuscular richness of blood. By calculating the errors of the instrument and method of using it, careful experiment will determine these circumstances.

For the information of your readers who may be desirous of making a series of experiments to differentiate their results, I will add that the image of the corpuscles and ruled lines in Gowers's apparatus may be projected by means of a camera lucida eye-piece upon a white screen; in this way the corpuscles may be pricked out and enumerated.

ROBERT AMORY.

LONGWOOD, April 11, 1879.

A CASE OF PULMONARY THROMBOSIS.¹

BY E. CHENERY, M. D.

I REPORT the following as a case of pulmonary thrombosis, not because I can certainly demonstrate that the obstructing clot originated in the lungs, where it did its mischief, but because it was an infarction of vessels belonging to the right half of the circulation. Indeed, my impression is that the clot started from the neighborhood of the uterus, and came up through the inferior vena cava, at last lodging in the trifurcation of the right pulmonary artery, where it afterwards augmented in size till it produced complete obstruction to the bronchus of that vessel. But in saying this I am not unaware that Juergensen teaches that "pulmonary infarctus is not to be thought of unless undoubted sources for the production of the embolism be demonstrated." This case is interesting as illustrating how the accident, so to speak, presents itself unawares, and might be mistaken, as it doubtless has been, for collapse.

I was sent for on the morning of January 4th to see a maiden lady aged twenty-nine, who had enjoyed excellent health, rarely having been sick, and not at all recently. Two days before, as she was getting over her catamenia, she took a sudden cold, and had not since been out. I found her in bed, with flushed face and slight cough. She had headache, a pulse of 120, and respiration 34. I thought at first sight that she had pneumonia. There were no abnormal heart sounds; percussion was a little dull over the right back, but there was no crepitation, and the case was regarded as one of congestion of the lungs, with threatened pneumonia. She received a portion of sulphate of magnesia and aconite. The next day she seemed much better; the cough was gone and the dullness diminished, while the pulse had fallen to 100 and the respiration to about 26. She now complained of pain and tenderness in the region of the uterus. The next day she was much the same, only the tenderness had extended higher up, giving me to fear that I was to have a case of pelvic peritonitis. Warm applications with turpentine were directed to be employed over the abdomen, and liquor ammoniæ acetatis was given. During the night she seemed worse, had diarrhœa, and did not sleep. At 5.30 the next morning she felt a sharp, cramp-like pain in the left side in the region of the heart, which began to beat heavily. She became oppressed for breath, the lips turned blue, the skin growing cold, and profuse perspiration starting out at every pore. When I saw her at nine A. M., her whole surface was cold, and yet not so to herself, and the clothes next to her were saturated with the abundant sweat. Auscultation showed the air entering into all parts of the lungs. There was no pulse at the wrist, and apparently but little action on the left side of the heart, while the right was laboriously at work, with unusual impetus against the ribs and sternum, and loud sounds of the valves. Nothing could be plainer than the great disproportion in the action of the two sides of the

¹ Read before the Suffolk District Medical Society, January 25, 1879.

heart, with sounds extending further to the right than to the left. There was no cough nor bloody expectoration. Her voice was reduced to a whisper, but her intellect remained clear. At five p. m., Dr. J. H. Warren saw her with me, and judged in the case as I did. The temperature under her tongue at this time was 99.50° F. Her friends and herself were informed of the nature of the case, and what would most likely be the result. She grew gradually worse, more and more cyanotic, short of breath, and weak, and died at midnight, eighteen and a half hours after the first symptoms of danger. It is not to be assumed that the pain originated on the instant the local infarction began, but only when the obstruction to the circulation became sufficient to be embarrassing to the heart. That the obstruction was not in the right heart itself is plain from the clear though loud sound of the valves, nor was there any evidence of regurgitation, as there would have been had the valves been tied down. It is equally plain that the blood did not return to the left heart except in partial amount; hence its collapsed and inactive condition, as also that of the arteries and capillaries of the systemic circulation. Hence, also, the profuse sweating. The prominent symptoms about the heart were clearly brought out in an experiment on a dog, a few days later, when, having him under ether and his abdomen laid open, the diaphragm was punctured, allowing of collapse of the left lung, with obstruction, of course, to the left pulmonary circulation; then quickly raising the chest wall the heart was brought into full view and handled. As the obstruction to the circulation in the lung came on the right heart enlarged, and put forth unusual effort to overcome the hindrance, while the left heart became shrunken and ineffectual in its efforts to supply the aorta, which also fell into collapse. By reason of the engorged right side the heart was drawn towards the right, and its impulse was carried further in that direction and in front than normal, with a corresponding recession from the left, both as to impact and valvular sounds. Thus what was here seen was in perfect accord with what was felt and heard in the case of my patient.

In September, 1875, a case of double thrombosis came under observation, in a lady forty-six years of age, the clots forming three hours from each other, and arising, without doubt, from blood-stasis, as she had been sick for some time with malignant right ovary. After the first attack, which occurred at three a. m., I saw her. Her symptoms were then precisely like the case I have detailed. Warmth, friction, and stimulants changed the character of the surface a little, and rendered her somewhat more comfortable for a time, when I left her. At six o'clock another attack occurred, and she almost immediately expired, her face being almost as cyanotic as if she had been hanged.

Dr. R. H. Fitz kindly conducted the autopsy for me. According to the general fact, the right lung had the older clot, being the one usually obstructed when only one is involved. The clot dipped into the three branches of the artery. On the left was a similar clot lodged in the bifurcation, more recent than the former, but distinct in character from the post-mortem coagula. The age of the two clots doubtless corresponded with the two seizures.

Notwithstanding Bristowe teaches that "the symptoms of pulmonic obstruction are by no means typical," we feel that, with the above facts before us, we are on safe ground for concluding that the case of our late patient was a case of pulmonary obstruction, probably of the right side, from a clot either originating on the spot or brought there from a distance.

ELASTIC CAUSTIC PENCILS OR BOUGIES.

BY WILLIAM A. BYRD, M. D., QUINCY, ILL.

In the *JOURNAL* for March 20, 1879, page 405, appears: "Dr. Pajot prepares an elastic pencil of caustic by dipping a laminaria tent, diameter two millimetres, into a rather thick mucilage, and afterward rolling it in finely pulverized nitrate of silver; when dry it forms an elastic pencil which may be readily introduced into the uterine or other cavity without fear of fracture."

The first article I ever contributed to a medical journal was to the *St. Louis Medical Reporter* in 1867 or 1868, describing the treatment of a case of prostatitis by means of slippery-elm-bark bougies dipped in a saturated solution of nitrate of silver and allowed to remain until thoroughly impregnated with the solution; then taken out, dried, and passed down the urethra to the affected spot, and allowed to remain until the nitrate had exerted its cauteriz-

ing effect. Since then I have used the medicated bougies or "caustic pencils" frequently, especially in the treatment of suppurating chronic sinuses and granular erosion of the cervix uteri. Some time in 1868 I commenced preparing the bougies or "pencils" by placing them with their ends in water until well coated with mucilage, and then rolling them in finely powdered sulphate of zinc, then allowing them to dry, when they would be ready for use by simply moistening and inserting into the cavity intended for treatment. Other caustics may be used the same way. The slippery-elm-bark pencils can be easily and quickly made by any one, of any desired length or thickness, very much cheaper than laminaria. They furnish their own mucilage, can be had on short notice in country localities, and by leaving them in the cavities being treated they swell up by imbibing moisture, and produce, as does laminaria, "over-distention," which is a great adjuvant to their cauterizing property.

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 5, 1879.

Cities	Popula- tion estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from					
				The Pri- nci- pal "Zymo- tic" Diseases.	Pneumo- nia.	Diphtheria and Group.	Scarlet Fe- ver.	Diarrheal Diseases.	
New York.....	1,085,000	534	25.66	17.97	14.23	4.12	7.86	2.43	
Philadelphia.....	—	286	—	12.90	8.04	3.84	3.49	0.35	
Brooklyn.....	564,400	233	21.93	13.85	15.55	4.20	6.30	1.26	
Chicago.....	—	138	—	28.98	6.52	8.69	8.69	0.73	
St. Louis.....	—	97	—	5.15	17.63	—	—	—	
Baltimore.....	365,000	139	19.86	12.95	8.63	5.04	4.32	—	
Boston.....	369,000	127	18.39	18.11	11.81	14.23	1.58	4.74	
Cincinnati.....	—	104	—	31.73	8.65	3.84	20.19	—	
District of Columbia...	160,000	72	23.46	11.11	11.11	4.17	2.78	—	
Cleveland.....	—	51	—	13.73	11.76	11.76	—	—	
Pittsburgh.....	—	30	—	—	—	6.66	—	—	
Milwaukee.....	—	38	—	15.79	10.53	15.79	—	—	
Providence.....	101,000	27	13.93	25.93	11.11	7.41	7.41	—	
New Haven.....	60,000	19	15.50	5.26	10.52	5.26	—	—	
Charleston.....	57,000	27	24.71	14.82	3.71	3.71	—	3.71	
Nashville.....	—	11	—	18.18	9.09	—	—	9.09	
Lowell.....	53,300	15	14.67	6.67	20.60	—	—	—	
Worcester.....	52,500	20	19.86	15.00	5.00	—	—	—	
Cambridge.....	51,400	7	7.10	14.29	14.29	14.29	—	—	
Fall River.....	48,500	16	17.20	12.50	—	—	12.50	—	
Lawrence.....	38,200	17	23.21	29.41	—	23.53	—	—	
Lynn.....	34,000	13	19.94	23.08	7.69	—	15.39	—	
Springfield.....	31,500	11	18.21	18.18	—	18.18	—	—	
New Bedford.....	25,000	16	20.90	6.25	18.75	—	—	—	
Salem.....	26,400	9	17.78	—	—	—	—	—	
Somerville.....	26,500	6	13.40	—	16.67	—	—	—	
Cheney.....	20,800	7	17.55	—	14.29	—	—	—	
Taunton.....	20,200	9	23.23	22.22	11.11	—	11.11	—	
Holyoke.....	18,200	6	17.19	—	25.00	—	—	—	
Gloucester.....	17,100	4	12.20	—	25.00	—	—	—	
Newton.....	17,100	—	—	—	—	—	—	—	
Haverhill.....	15,300	4	13.63	—	25.00	—	—	—	
Newburyport.....	13,500	6	23.17	—	16.67	—	—	—	
Fitchburg.....	12,500	5	20.86	—	20.00	—	—	—	

† Not reported.

As compared with the previous week, there is an increased mortality from cerebrospinal meningitis and diarrheal diseases, decreased from acute pulmonary diseases and whooping-cough; no other marked change. From *whooping-cough*, 12 deaths were reported in New York, five in Philadelphia, three in Brooklyn and Cincinnati, one in Baltimore, Providence, and Taunton. From *typhoid fever*, five in Philadelphia, two in Chicago, St. Louis, and Cincinnati, one in New York, Baltimore, Boston, District of Columbia, Providence, Charleston, Lowell, Lawrence, and New Bedford. From *typhus*, six in Chicago, three in New York, Philadelphia, and Cincinnati, two in Brooklyn, St. Louis, and Worcester, one in Baltimore, District of Columbia, and Providence. From *cerebro-spinal meningitis*, seven in Chicago, two in New York and Philadelphia, one in St. Louis, Boston, District of Columbia, Charleston, Nashville, and Lynn. From *measles*, two in Baltimore, one in New York,

Cleveland, and Worcester. From *catarrhal*, *remittent*, and *nervous* fevers, each one in Baltimore. From *typhoid* fever, one in St. Louis and Milwaukee. None from *small-pox*. Pulmonary diseases are prevalent in Louisville, scarlet fever and diphtheria in Buffalo, scarlet fever and pulmonary diseases in Richmond, fevers and pulmonary diseases in Savannah and New Orleans, diphtheria and pulmonary diseases in San Francisco. In eighteen of the nineteen cities of Massachusetts, the mortality from scarlet fever, whooping-cough, and erysipelas had diminished; from the other "zymotic" and from pulmonary diseases increased.

Sergeant Purcell's meteorological record for the week, in Boston, is as follows:—

Date.	Barom-eter.	Thermom-eter.	Relative Humidity.		Direction of Wind.		Velocity of Wind.			State of Weather.			Rainfall. Method of Snow.		
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	T. A. M.	P. M.	T. A. M.	P. M.	S. P. M.	T. A. M.	P. M.	S. P. M.	Duration in Hours.	Amount in Inches.	
March 30	29.300	41.34	34.1	38.8	74.77	N	W	NW	8	8	R	F	C	6.5	.27
" 31	29.124	42.20	24.7	70.0	100.1	N	N	NW	7	20	O	S	F	14.6	.27
April 1	29.144	42.15	24.1	70.0	100.1	NW	NW	W	12	24	O	F	C		.27
" 2	29.180	42.30	30.1	48.0	75.5	W	W	W	10	24	O	F	C		.27
" 3	29.407	41.21	28.0	47.1	67.0	W	W	N	12	11	O	F	S	9.8	.14
" 4	29.662	25.39	19.0	8.0	47.0	W	W	W	12	13	F	F	F		.02
" 5	29.927	32.29	19.0	7.0	8.0	W	W	W	10	7	S	F	F		
Weekly Summary.	Barometer.		Thermometer.		Humidity, Saturation being 100.			Wind.			Rain.				
	Mean	29.448	Mean	33.5	Mean 68.4			Total miles traveled, 2883.			Total amt. .78 in.				
	Max.	29.981	Max.	51	Max. 100			Prevailing direction, W.			Duration, 30 hrs. 55 min.				
	Min.	28.961	Min.	19	Min. 37										
	Range	1.020	Range	32	Range 63										

Barometer corrected for temperature, elevation, and instrumental error.

Explanation of weather symbols: O, cloudy; C, clear; F, fair; G, fog; H, hazy; R., rain; S., snow or sleet; L. S., light snow; T., threatening.

Station: Latitude $42^{\circ} 21'$; longitude $71^{\circ} 4'$; height of instrument above the sea, 77.5.

A few cases of *yellow fever* are reported, and thought to be authentic, from the Mississippi Valley, where the various "investigations" under the government have not resulted in that improved sanitation to which attention should have been forcibly directed. The United States steamer Plymouth was fumigated and aired in a cold atmosphere after having had cases of yellow fever aboard. Upon returning to a warm latitude the fever broke out again, and the ship has been ordered to Portsmouth, where it is to be hoped that she will be disinfected.

For the week ending March 15th, in 149 German cities and towns, with an estimated population of 7,436,648, the death-rate was 27.2, an increase of 0.6 from the previous week. The mortality from typhoid fever was still increasing, and from diphtheria rising again; from the other infectious diseases, including typhus fever, it had diminished. Three thousand eight hundred and eighty-four deaths were reported: 574 from consumption, 498 from acute diseases of the respiratory organs, 147 from diarrhoeal diseases, 181 from diphtheria and croup, 65 from whooping-cough, 62 from typhoid fever, 39 from scarlet fever, 32 from measles, 30 from puerperal fever, 13 from typhus fever, one from small-pox. The death-rates ranged from 17.5 in Darmstadt to 36.1 in Görlitz.

For the week ending March 22d, in the 20 English cities having an estimated population of 7,383,999, the death-rate was 28.3, an increase of 0.3 from the previous week, diseases of the respiratory organs continuing excessively fatal, and influenza prevailing: whooping-cough, measles, and scarlet fever were fatal in different cities; small-pox continued prevalent in London (as also in Dublin). The death-rates ranged from 18.6 in Portsmouth to 32.0 in Leeds. Four thousand deaths were reported: 705 from diseases of the respiratory organs, 176 from whooping-cough, 92 from scarlet fever, 51 from measles, 37 from fever, 34 from diarrhoea, 21 from diphtheria, 15 from small-pox (in London).

No new case or death from the plague in the Volga district had been reported from February 9th to March 21st, when one broke out in Wetlianka. At that time the sanitary cordon had been given up except in two small villages, but Wetlianka was still left under the supervision of a medical commission. The German experts recommend (1) sanitary supervision of all suspicious places for a considerable time; (2) maintenance of a sanitary cordon around every infected place until six weeks from the occurrence of the last case or death; (3) a ten-day quarantine against infected districts. Sanitary measures are carried out vigorously: many dwellings have been burned, cemeteries disinfected, etc., and the Russian troops returning home are subjected to most stringent regulations. Typhus fever is diminishing in St. Petersburg; some of the cases, however, still present unusual symptoms.

OBITUARY.—Dr. Isaac Hays died in Philadelphia on Monday morning. He has been long well known to the profession as the editor of *The American Journal of the Medical Sciences*, with which he has been connected from its commencement. He has not been in practice for many years, but in early life was an ophthalmologist. He succeeded in attaining the goal to which every editor aspires, namely, the production of the best medical journal on this continent.

AMERICAN MEDICAL ASSOCIATION.—For the accommodation of delegates and their families the Great Southern Mail and Kennesaw Route has arranged to place on sale the 29th of April to the 4th of May, inclusive, tickets at reduced rates to Atlanta, Ga., and return, and good until the 20th of May. A Pullman sleeper for delegates from Philadelphia will be placed in position at Broad Street depot (P. W. and B. R. R.) at nine o'clock P. M., on the 29th of April, and at the same hour each evening during the sale of tickets, so that they may avoid loss of rest in waiting for the train, which leaves at one o'clock, A. M. At Washington an additional sleeper will be attached, which will afford ample accommodation. The varied, beautiful, and romantic scenery along this route is unequaled by that along any other running to the South. Traversing what were the battle-fields of Manassas and Bull Run, the train sweeps past the Peaks of Otter, courses through the Roanoke Valley, crosses the Blue Ridge and Alleghany Mountains, winds along the banks of the Tennessee River, and runs in full view of the picturesque mountain ranges of North Georgia, and delivers the passenger in Atlanta, the "Gate City of the South," in less than thirty hours from Washington.

The attention of delegates from Washington, and all points north and east thereof, is called to the requirements necessary to secure reduced rates: application must be made to Dr. W. B. Atkinson, permanent secretary of the American Medical Association, No. 1400 Pine Street, Philadelphia (inclosing stamp), who will furnish certificates, on presentation of which at the various points mentioned the tickets can be purchased to Atlanta and return.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.—A regular meeting of the society will be held on Monday evening next, April 21st, at eight o'clock, at the rooms of the Boston Medical Library Association, 19 Boylston Place. Reader, Dr. E. N. Whittier. Subject, Six Cases of Abdominal Tumor in Children. **FRED. C. SHATTUCK**, Secretary.

BOOKS AND PAMPHLETS RECEIVED.—Physiological Therapeutics. A New Theory. By Thomas W. Poole, M. D., M. C. P. S., Ont. Toronto: The Toronto News Company. 1879.

A Manual of Examination of the Eyes. By Dr. E. Landolt, Directeur-Adjoint of the Ophthalmological Laboratory at the Sorbonne, Paris. Translated by Swan M. Burnett, M. D., University of Georgetown. Revised and enlarged by the Author. Philadelphia: D. G. Brinton. 1879.

Report of Certain Medico-Legal Cases. By Thad. M. Stevens, M. D., Indianapolis, Ind. (Reprint.) St. Louis. 1879.

On the Permanent Removal of Hair by Electrolysis. By George Henry Fox, A. M., M. D., New York. (Reprint.) 1879.

The Difficulties and Dangers of Battey's Operation. By George J. Engelmann, M. D. (American Medical Association.) 1878.

An Address upon the Life and Character of Lunsford Pitts Yandell, M. D. By Richard O. Cowling, M. D. Louisville, Ky. 1879.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. C. — THURSDAY, APRIL 24, 1879. — NO. 17.

THE POST-MORTEM DIAGNOSIS OF CERTAIN FORMS OF ASPHYXIA.¹

BY F. W. DRAPER, M. D.

ASPHYXIA is a comprehensive term applied to those cases in which death begins at the lungs. Traditional usage has sanctioned this application in spite of the teaching of physiology and of pathology. Its synonym, apnoea, expresses more precisely the respiratory seat and character of the fatal process, the asphyxia — pulselessness — being the last in the series of events incidental and peculiar to this mode of dying. Although objection may very properly be made, on strict etymological and scientific grounds, to the common employment and interpretation of this word, it has become so firmly fixed in use that any attempts to disallow it and to substitute another term for it would result in needless confusion.

However we may quarrel with the name, the thing signified is sufficiently specific. Bichat's terse description — death beginning at the lungs — indicates clearly the full manner and scope of the mortal process involved. The entire suspension or serious compromise of the respiratory function results, quickly and inevitably, in a chain of phenomena whose end is death. Those phenomena are few, simple, and well recognized. Their whole import is centred in the non-arterialization of the blood. All the mischief done begins and culminates in this suspension of the vital chemistry within the thoracic walls. Whatever, therefore, obstructs or interrupts this process in the blood produces asphyxia. Simple as this general statement is, the causes and conditions included under it are various and manifold. They may be grouped, however, under three principal heads: —

I. Causes which arrest the normal action of the muscles of respiration. Thus cold may act, or the muscles may become exhausted through progressive asthenia, or their nervous stimulus may be lost through division or compression of the spinal cord or of the pneumogastric or phrenic nerves. Mechanical restraint and the tonic spasm of tetanus or strychnia kill in this way.

¹ Read before the Boston Society for Medical Observation.

II. Causes which produce a cessation of the action of the lungs themselves. The division of the eighth pair of nerves and the mechanical effects of the introduction of air or of the abdominal viscera into the thoracic cavity are examples.

III. Causes which wholly or nearly exclude the entrance of atmospheric air to the lungs. This class of causes is the one with which we are most familiar. Cases of hanging, strangulation, drowning, and suffocation (including smothering) are the most frequent and obvious illustrations. The air may be excluded by the presence of a foreign body in the larynx, trachea, pharynx, or upper part of the œsophagus. Finally, irrespirable and irritant gases cause death in this manner. The ultimate effects of all these various causes are the same. The mechanical functions of the respiratory organs being arrested, the chemical processes are quickly compromised. The action of the heart and the functions of the brain are speedily embarrassed and suspended, and death ensues. Every physician knows in a general way the usual post-mortem appearances in the bodies of persons dead by asphyxia. They are in harmony with the recognized theory of this mode of death. They consist comprehensively in an unmistakable abnormality in the color, consistency, and distribution of the blood. The dark color and the uniform fluidity of the blood, the hyperæmia of the venous system, the vacuity of the arterial system, — these are the well-known anatomical signs. But there are certain specific appearances which are peculiar to special forms of death by asphyxia, and which are not so familiar as are those just summarized. The opportunity has been afforded me in a considerable number of instances during the past year to study the anatomical changes produced by asphyxia. Actual observations of this kind have not been presented very frequently to medical societies in this vicinity. It is believed, therefore, that a review of the two cases which I have selected as illustrating in a typical way the alterations caused in the body in death by drowning and by suffocation will not be devoid of interest. I shall try to show, also, the value of a medical examination in determining the cause of death when the circumstances attending the death are obscure or are wholly unknown.

CASE I. *Asphyxia by Submersion.* — In the afternoon of January 17, 1878, the dead body of a young woman under twenty years of age was found at low tide in the dock at the foot of D Street, in South Boston. It was not known then, nor has it ever been ascertained, whence the deceased came, nor has her personal identity been established. Although the clothing of her body was entire, the hat only being missing, and although the death had been so recent that identification would have been easy, no one of the number who saw the body at the morgue made known the girl's name and residence. In the absence of all circumstantial knowledge as to the cause and manner of the death, a medical

examination became necessary. The post-mortem inspection was made forty hours after the finding of the body, the weather being cold and the body well preserved. Upon an external view the following appearances were observed: The face, scalp, and neck were of a uniformly dark red or port-wine color. The lips were nearly black. The expression of the face was calm. The eyelids were half open, the eyes somewhat prominent. The conjunctivæ were suffused. The corneæ were dull and flaccid. The pupils were half dilated. The teeth were firmly opposed; the gums were bright red; the tongue was in its natural position behind the teeth. Froth was escaping from the mouth and nostrils. Below the neck the body showed very little external change. Cutis anserina was present in moderate degree. Except a few faint red patches and streaks about the scapular regions, there was no cadaveric lividity. There were no external signs about the abdomen or elsewhere of beginning putrefaction. The hands were firmly closed, the thumb in the palm. The elbows and knees were semi-flexed.

Upon section the body presented the following appearances, unnecessary details being omitted: Externally, the heart showed distinct hyperæmia, the vessels being distended with dark blood. There was no fluid in the pericardium. The pulmonary artery and venæ cavae were full; the aorta was empty. The right cavities of the heart were gorged with dark, almost black blood, of fluid consistency, without clots. The left auricle and ventricle were empty, the ventricle firmly contracted. The valves and muscular substance of the heart were normal. The pleural cavities contained, in each side, about four fluid ounces of bloody serum. The lungs were fully expanded, emphysematous in appearance. Their color was light red, or pinkish, anteriorly; darker posteriorly. Upon section they showed a uniformly reddened color; their substance was dense, non-crepitant, exuding blood and froth from the cut surface. The bronchi, trachea, and larynx contained fine froth, slightly tinged with a pinkish color, and their mucous lining was deeply injected. Of the organs of the abdomen, the peritoneum, kidneys, spleen, liver, and intestines were hyperæmic to a marked degree, the blood-vessels being distended and the color of the viscera darkened. The stomach contained four fluid-ounces of thick brown fluid, with white masses of half-digested food scattered through it. If water had been swallowed immediately before death or in the act of dying, it was not in quantity sufficient to be made apparent in the contents of the stomach. The mucous membrane was uniformly injected, of a dark red color, and without erosions; the muscular coat was thrown into numerous prominent folds or rugæ.

The cerebral meninges were in a condition of hyperæmia, the larger vessels being fully distended, and the capillary net-work of the pia mater standing out in distinct relief. The brain substance was firm; the puncta

cruenta were numerous and distinct; the lateral ventricles contained each one and one half drachms of straw-colored fluid. The vessels of the choroid plexus and the venæ Galeni were injected.

Summarizing these appearances in groups, we have: (1.) Injection of the brain and its meninges, and of the thoracic and abdominal viscera. (2.) The blood dark in color and of fluid consistency. (3.) The lungs expanded to their full extent. (4.) Froth in the air-passages and exuding from the mouth. (5.) A uniform reddening of the skin of the face, neck, and scalp. (6.) Cutis anserina.

With these post-mortem conditions before us pertaining to a dead body whose identity and history are wholly undetermined, is it possible to assign the cause of the death with accuracy? It is easy at the outset to guess that the girl drowned herself; the situation of the body when first discovered, its wet clothing, all the associations, make such a conjecture instantly convenient. But now our question is whether the results of the medical examination are of a character sufficient to confirm or to refute this ready-made supposition. The mere situation of the body and its surroundings at the time of its discovery should not be allowed too prominent a place in shaping a decision, for a number of possibilities immediately occur to mind, any one of which could reasonably account for the presence of a dead body near the sea-wall of a dock at low tide. So that there was nothing connected with the finding of this woman's corpse that by itself could be relied upon as determining the manner in which she met her death. Turning now to the evidence afforded upon a medical examination of the body, we may remark that the autopsy was available at a seasonable time. The body was well preserved, and certain distinctive appearances present at the time of the examination would have certainly disappeared wholly, or have become greatly modified and obscured, after the lapse of a few days or perhaps hours. The season of the year (midwinter), the interval after death, and the limited exposure of the body were all favorable to a satisfactory investigation. In an endeavor to interpret the anatomical appearances here presented, with a view to form a correct determination of the cause of death, one finds that they are not of equal value for this end. For example, it must be said of the condition of the brain that taken by itself it is not sufficiently characteristic to be of much assistance in the diagnosis. Cerebral hyperæmia is incidental to so many modes of dying that it is not of much value in establishing a presumption of death by a special form of asphyxia, like drowning. Casper declares that its absence is the rule in the bodies of drowned persons, and that its presence and its absence are alike insignificant as regards death by that mode. We know very well, too, that it is an appearance very commonly observed after death by poison, or by sthenic disease, or by coma. Nevertheless, it is not inconsistent with a hypothesis of

death by submersion in the present instance, its relation to the diagnosis being, at the best, negative only. Again, the condition of the heart — crowded with blood in its right cavities, empty and tense on its left side — is common enough in connection with death by asphyxia, and is explained in accordance with well-known physiological principles, but it does not indicate the form of asphyxia, it is not specially significant of death by drowning, and it is met with in cases wholly independent of the element of apnœa. Moreover, while it is to be expected in death by drowning, it is not constant even here, for many deaths by submersion occur in consequence of what Casper terms neuro-paralysis, rather than by asphyxia simply, and in these cases there is no cardiac congestion. The state of the blood, too, as regards color and consistency, the remarkable and universal fluidity and depth of tint, resembling the expressed juice of dark grapes, is considered by many as a constant sign of death by drowning. It means that access of atmospheric oxygen has been cut off from the blood, and that its coagulability is thus lessened. But this result, again, is not peculiar to asphyxia by drowning. The same kind of blood-poisoning may occur in other ways, and is an incident of every kind of death which ensues in consequence of any hindrance to the entrance of the air into the lungs; it is seen, too, in narcotic poisoning. Taylor, indeed, asserts that a fluid state of the blood is not invariably present in those dead by drowning, and that the presence of clots, though exceptional, is by no means inconsistent with that mode of death. Riedell, Orfila, Devergie, and Ogston make similar qualifying statements. Of the congestion of the abdominal viscera we must make the same comment — that it is not pathognomonic; it does not, by itself considered, aid us in diagnosing the manner in which this woman died. Passing from these abnormalities in the circulation, we come upon other phenomena more worthy of special consideration. The first of these is the peculiar and complete expansion of the lungs, an appearance which Casper declares to be “truly thanatognomonic.” His words so fully describe the condition of the lungs in the present case that I will quote them.¹ “The appearance,” he says, “consists in a complete distention of the chest by the lungs, which press close to the ribs and almost completely cover the heart; they appear to be inflated like a balloon, and are not ordinary healthy lungs, tolerably firm and crepitating, but feel exactly like a sponge. The distention of the lungs is, in part, an actual hyperæmia, in consequence of the very violent inspiratory acts carried on at the momentary emergences of the head of the drowning person above the surface of the water, but partly and chiefly in consequence of the inhalation of the fluid in which the drowning has occurred into the lungs.”

In close relation with this condition of the lungs we have another

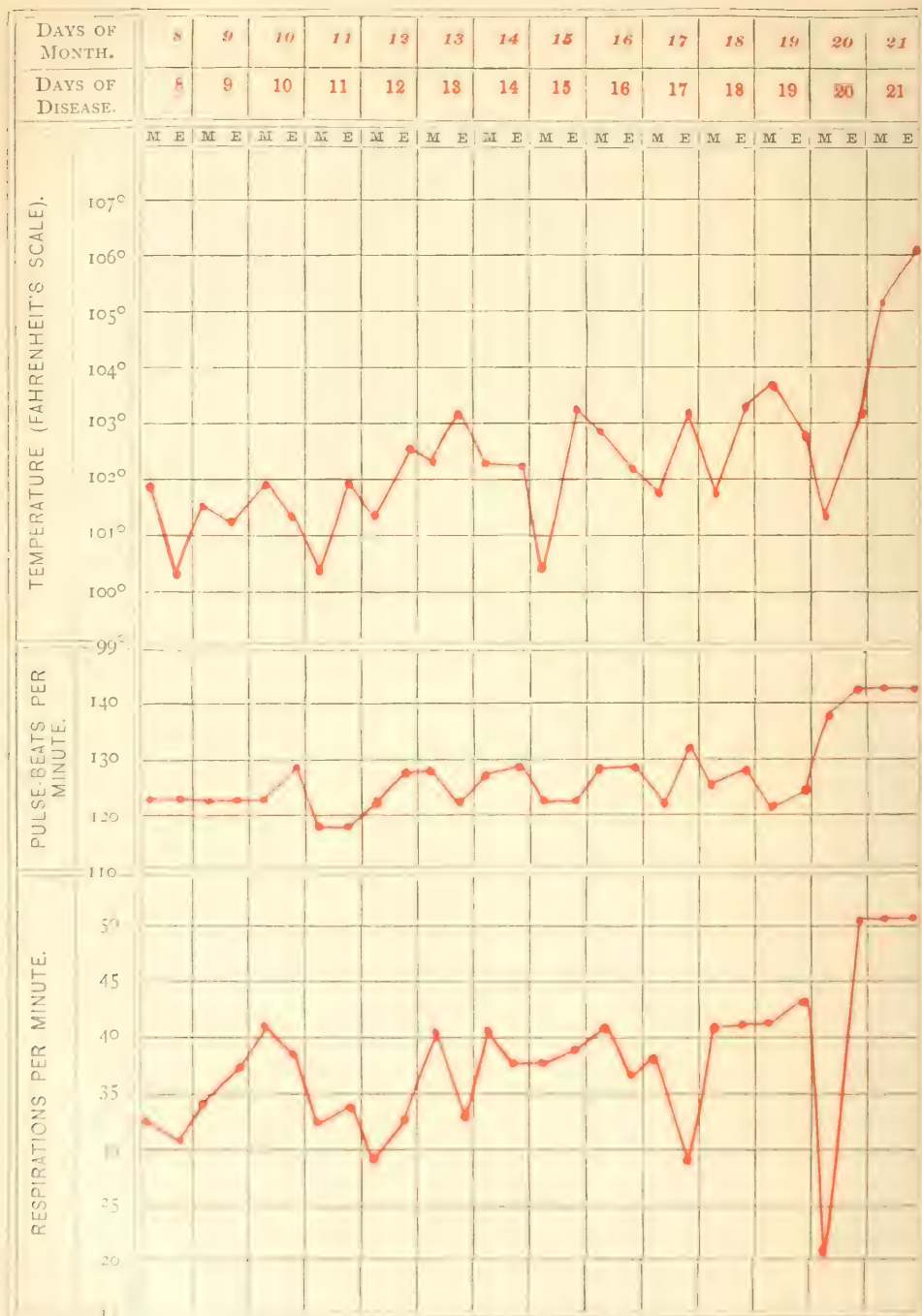
¹ Handbook of Forensic Medicine, vol. ii., page 239, Sydenham Edition.

sign, which Taylor describes as characteristic of asphyxia by submersion, namely, the presence of froth in the bronchi and trachea and at the lips and nostrils. In the case before us this was well marked. The froth is different from that due to putrefaction and from that present in the air-passages of those who have died by asphyxia in other forms besides that of drowning; its bubbles are fine, generally white, but sometimes showing pinkish stain, and in immediate contact with the bronchial and tracheal walls, without the interposition of mucus. Ogston describes it as a fine lather, like that made with soap, rather than a froth. It is of course very evanescent, disappearing soon after the removal of the body from the water, and absent altogether from the air-passages after prolonged submersion. There has been some difference of opinion among medico-legal authorities with regard to the manner in which this peculiar manifestation is developed. Orfila, Devergie, and, more recently, Ogston insist that it is present only when the person in drowning has been able to raise his head above the water temporarily, and in that instant to get atmospheric air; but Casper and Taylor affirm that such emergencies are not requisite, and that froth is found in the air-passages of the drowned when they could not have risen to the surface alive after submersion, and that it is found also in animals forcibly submerged. All writers, however, agree that the appearance is the result of vital action, and that it indicates that the person was living at the moment of submersion. All agree, too, in regarding it as a valuable diagnostic sign of death by drowning.

The striking brick-red discoloration of the skin of the face, neck, and scalp, uniformly developed, indicates the beginning of putrefaction in those parts. It aids in the diagnosis, because it is a manifestation peculiar to the bodies of the drowned when considered with reference to the condition of the other parts of the cadaver. Usually, after every other kind of death than drowning, and in every medium except water, decomposition of the human body shows its first external sign on the abdominal coverings; but in the bodies of the drowned the order is reversed, and while the rest of the cadaver remains in a state of excellent preservation, the parts mentioned, the face, neck, and scalp, take on a uniformly red or port-wine color, gradually growing darker as exposure is prolonged and putrefaction advances. Finally, the cutis anserina deserves a word of comment. This condition of the skin is hardly ever absent, even in summer, in cases of death by drowning; sometimes, however, it is observed in other forms of violent and sudden death. It indicates¹ the result of nervous shock experienced at the moment of immersion, and so it becomes a sign that the body was living at that moment. In the presence of these appearances, offered by this dead body, some of them distinctive of death under water, none of them in-

¹ Casper.

CASE OF ACUTE TUBERCULOSIS.



consistent therewith, we reach a diagnosis that asphyxia by drowning was the single cause of the girl's death.

Certain other signs reckoned valuable in such cases, were absent or unobserved in this instance: for example, the amount of water in the stomach was insignificant, the entire contents — liquid and solid — measuring about four ounces only. Although the presence of water in the stomach affords a basis for presumption that it entered that organ in the act of drowning, and so is considered as having a place among the signs of death in that manner, its absence should not be taken as evidence to the contrary. It is not to be forgotten, too, that water found in the stomach after death may have made its way thither in the natural course some time before death, for the purpose of satisfying thirst. When, however, there are discovered mingled with the contents of the stomach any foreign matters of the same description as those suspended in the water in which the death is presumed to have occurred, then the evidence is complete.

(To be concluded.)

A CASE OF SUPPOSED ACUTE TUBERCULOSIS RESEMBLING TYPHOID FEVER.¹

BY F. MINOT, M. D.,

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THE interest of the following case centres in the diagnosis. In its general features it strongly resembles typhoid fever, and had the thermometer not been used I think most observers would have considered it to be such, with rather more catarrhal manifestations than usual.

The patient, a respectable Irish girl, twenty-three years old, entered the Massachusetts General Hospital January 7, 1879. She had been much overworked, but her health had always been good until three months previously; since then she had not been feeling well. A week before entrance she began to complain of pain in the abdomen and chest, followed by violent "cramps" in the belly and vomiting. There was no chill, no epistaxis, no marked headache. Three days later diarrhoea set in, the discharge being thin and of a light yellow color. There had been slight delirium. The above account was furnished by the friends.

The patient was somewhat apathetic, but answered questions intelligently. Pulse 112, and full; temperature (evening) 101.4° F.; breathing rather hurried. There was a bright red spot over each cheek. Tongue dry, covered with thick white scales; protruded with difficulty. Lips parched. Abdomen rather full and tympanitic. Ten-

¹ Read before the Suffolk District Medical Society, January 25, 1879.

derness and gurgling on pressure in right iliac fossa; also some tenderness in the left. No rose spots, nor were any found subsequently.

From the 7th to the 10th of January nothing of special importance was noticed, except that the morning temperature was higher than the evening. On the 10th the patient expectorated a small amount of viscid mucus, slightly streaked with blood; there was but little cough. On examination dullness and deficiency of respiration were found at the base of the right back, in the axillary line. The examination was hurried, on account of the state of the patient. She was very restless at night, but had no marked delirium. January 12th, pain, swelling, and tenderness over the region of the right parotid gland were noticed. In the evening she was slightly delirious. The urine was examined, but nothing abnormal found.

From the 12th to the 18th the only new symptoms noticed were increase of cough, which was short and moist; rattling in the throat, with occasional expectoration of the same character as before; occasional slight delirium, chiefly at night; stools of the same character as before, though some of them were of nearly normal consistency. On the 18th, the tenderness and gurgling were still more marked in the right iliac fossa. The respiration in the right front was rough, with sonorous râles. In both backs there were rather fine moist râles; dullness in lower right back much less evident. No increase of splenic dullness was detected. The pain, swelling, and tenderness of the parotid gland were much diminished. The patient slid down in bed, so that the feet projected over the end, but she could turn from one side to the other with comparative ease. Through the day she was perfectly rational, and could be roused from her delirium at night. She took plenty of nourishment.

On the 20th, the following record was made: "Wildly delirious at night, at times shrieking, but at the same time able to recognize those about her; respirations 56, pulse 132 and weaker. Early in the morning the respirations fell to 20, and the pulse became stronger. No special dullness in back; coarse crepitant râle over right back, with friction sound at base, and in axillary line. Abundant moist, clicking râle throughout left back, with distinct metallic tinkling, resembling the sound of water dropping into a tin pan, in the corresponding region, and *synchronous with each sound of the heart*. Inspirations short and jerking. Through the night the delirium increased. In the afternoon profuse sweating began."

On the 21st, the temperature rose to 105°, and varied between that and 106° through the day. Difficulty of swallowing began, and increased. Face livid. Low, muttering delirium, occasionally violent. Respiration short, shallow, and rapid. Pulse very quick and weak. Occasional involuntary dejections. Profuse sweating of head and shoulders. She died at six P. M. No autopsy was permitted.

The treatment consisted in milk diet, with brandy, the amount of which was gradually increased, day by day, up to half an ounce every hour. At first chloral hydrate and bromide of potassium were given for sleeplessness, and later subcutaneous injections of morphia at night, in doses of one eighth and one sixth of a grain. Spirit of turpentine was given once, for tympanites, the only result noticed being a slight increase in the number of dejections. The patient was sponged twice daily with water.

The reasons for thinking the case to have been one of acute tuberculosis were the peculiar range of temperature, as shown in the annexed chart; the previous indisposition during a period of three months; the absence of rose spots and of enlargement of the spleen; the character of the delirium; and the predominance of physical signs indicating more important pulmonary disease than mere bronchial catarrh.

RECENT PROGRESS IN SYPHILOLOGY.

BY EDWARD WIGGLESWORTH, M. D.

Syphilis communicated by Tattooing. — Drs. Maury and Dulles report¹ at length the valuable results of a careful and very instructive investigation of twenty-two cases exposed to inoculation with the virus of mucous patches, in fifteen of which syphilis followed. Attention was called to these cases by the fact that a man having constitutional syphilis presented himself, in September, 1877, for treatment at the Philadelphia Hospital, bearing upon a tattooed figure on his arm a sore which had the characteristics of the primary lesion of the disease. The figure had been placed there two and a half months previously by a professional tattooer, who had moistened his pigments in whole or in part by inserting in his mouth the needles he used. The police were notified, active investigation was at once commenced, and in about a month the tattooer was arrested, and more than twenty-two of his victims were soon discovered and examined. The artist, J. K., theoretically a painter, actually a vagrant, was filthy in appearance, a very hard drinker, and a constant chewer of tobacco. He acquired syphilis in February, 1877, was under treatment at intervals, tattooing between whiles as occasion offered, until April 14th, when he again entered the hospital on account of mucous patches of the mouth and about the anus. He left the hospital un cured May 16th, and recommenced his tattooing, and from this time onward seems to have communicated his disease to most of the subjects of his art, — a strong argument in favor of locked hospitals for such patients. He returned to the hospital June 20th, his condylomata still flourishing. "He was discharged," like a shell into a powder mag-

¹ Amer. Jour. of the Med. Sci., January, 1878, page 44.

azine, "August 2d, for insubordination," and October 6th arrested, and at Dr. Maury's suggestion committed to the house of correction, the mucous patches still existing.

His method of tattooing was as follows: The outlines of a figure selected from a book of plates were pricked into the skin with a few needles set in a holder, the pigment being India ink rubbed up with water. He then sucked the residue of this pigment from the needles, and thrusting them thus moistened into a bottle of powdered vermilion would insert what adhered. This was repeated until enough vermilion had been employed, when in many cases he would spit upon the finished tattoo, and rub it dry with his hand or a dirty cloth. In some occasions both pigments were moistened with saliva.

The reported histories of the cases examined are arranged in three classes: I. Where the patients never had syphilis, and yet, as far as now known, were not inoculated; four cases. II. Where the patients had syphilis before being tattooed; three cases. III. Where syphilis had never existed, but was communicated by the tattooing; fifteen cases.

To attain as much thoroughness as possible, a definite plan of examination was first prepared, and each investigation conducted according to it: every patient was personally examined and scrutinized from head to foot; the asking of leading questions was avoided, especially in regard to the primary lesions, and special inquiry was made to exclude the possibility of the syphilis, where it occurred, having been acquired in some other way than by the tattooing. Of the many cases examined twenty-two are reported as being of sufficient scientific interest as well as of sufficient accuracy.

Résumé. The unmixed salivary secretion cannot communicate syphilis, though it may act as the carrier of the virus, for Classes I. and III. were equally exposed to the risk of infection, and yet Class I. escaped, and the immunity must be due to a fortuitous absence of the poison from the saliva.

In two cases water was used with one pigment, saliva with the other, and the primary lesion had its origin unmistakably at the part where the latter was used. The tobacco juice seemed to have no effect upon the virus, either in diminishing or increasing its activity. The appearances of constitutional infection (primary lesion) occurred after a period of incubation varying from one to seven weeks, general symptoms after three to ten. These terms may or may not have been as stated by the patients.

The initial manifestation, that is, a chancre excited by a specific irritant, was always a papule, which papule, like any other of its class, passed on under accidental circumstances to excoriation, pustulation, or ulceration, or, in one case, remained from first to last only and simply a papule.

Diday's theory that virus from a primary lesion causes an ulceration, from a secondary one an excoriated sore, is not supported by the facts in these cases. Multiplicity of the initial lesion, present in many cases, was due to the multiple inoculation.

Noteworthy was the frequency with which the papules were located on the penis and scrotum. This occurred in twelve cases, in seven of which the number was very great. In many the papules were on and within the prepuce and about the corona glandis, and were in their physical features exactly like chancres.

"The theoretical conclusions of our investigation are, we think, indisputably confirmatory of the view that *the virus from secondary syphilitic manifestations is in a high degree inoculable, that the primary lesion following such inoculation is a true chancre, and that with this begins constitutional syphilis, differing in no essential point from that contracted from a primary syphilitic lesion.*

"The practical conclusions are inseparable from the theoretical, namely, that too great caution cannot be used, lest by any means the virus of inoculable lesions be transferred to innocent persons. The hands of the surgeon, his instruments, bandages, or other appliances should be most scrupulously cleaned after use about syphilitic patients. Dentists may especially take to heart this lesson, which is the more deeply impressed upon our minds because at this time we are investigating a case where an unsuspecting woman was inoculated with syphilis of a most malignant type while under a dentist's hands.

"Tattooing, we think, might well be forbidden in the army and navy as a useless and perhaps pernicious practice, one which may injure the men and prove an expense to the government by bringing into hospitals and on the pension lists some who might otherwise be in active service.

"We think, too, that no false sentiment should prevent the distribution of such warning to the community as shall acquaint them with the sources of danger alluded to as well as the possibility of syphilitic inoculation in the acts of kissing, nursing, using in common table utensils, towels, or anything which may have come in contact with a syphilitic lesion.

Syphilis communicated by a Bite. — Robé adds¹ another to the list of histories of unusual infection. J. W., aged twenty-two, mulatto, oyster-shucker, had a fight about Christmas, 1877, and was bitten in the left side of the nose. March 17, 1878, he reports: Wound healed readily, but became sore a month later, painful and swollen. In a few weeks more, the submaxillary glands, especially upon the left side, became enlarged and tender. There was fever, sore throat, and malaise. Early in March a macular and papular eruption appeared upon the

¹ Archives of Dermatology, vol. iv., No. 3, July, 1878.

breast, back, arms, buttocks, and thighs. No cicatrix on penis, and any previous sore denied, though a clap was confessed.

The lesion at the site of the original injury consisted of an ulcer with indurated base, seated upon the left alar cartilage. Submaxillary and post-cervical glands enlarged, pharynx strongly injected. Trunk, arms, and thighs covered with a well-marked erythemato-papular eruption, the spots fading from the chest and being succeeded by disseminated pustules, which were also numerous upon the neck.

The inflicter of the bite was hunted up. He had a large mucous patch on the left cheek near the labial commissure, which had never been treated, though existing for months. Under bichloride of mercury internally and calomel dusted upon the primary induration, the patient, J. W., rapidly improved, and was at time of the report free from any lesion of the skin.

Syphilis and Vaccination. — It is reported¹ that in a small village near Frankfürth-on-the-Oder twenty-six children were vaccinated from a vaccinifer subsequently found to be the victim of hereditary syphilis. Twelve are said to have escaped infection, while the remainder suffered from constitutional disease. Lane² believes that a healthy person inoculated with lymph from a diseased child could not in one week elaborate a lymph capable of infecting others vaccinated with it, because the blood mass could not in such time become thoroughly poisoned. Early general infection seems to him impossible, but as to the secretions, whether natural or morbid, which are derived from diseased blood, he can see no reason why they should not partake of the contagious quality of the fluid from which they are formed.

Venus Vulgivaga. — The annual report for 1876 of the Imperial Hospital on the Wieden at Vienna states³ that since the "health-books" of the prostitute class have been consulted by independent and competent physicians the women applying as patients to the wards for syphilis have exhibited only primary lesions, thus shortening the time required for treatment. The exceptions to this are the non-registered women, the free-rangers, who manage to escape supervision. The advantages of registration from a sanitary point of view manifest themselves more and more every year, and it is to be hoped that this soon may become a universal custom.

A letter⁴ from St. Louis, arguing in favor of the reënactment of the "social-evil ordinance," hawked at and killed by pseudo-moralists, remarks, "When we compare the old law in its sanitary and police aspects with the present state of things, we seem to be a perfect Sodom or Gomorrah." Those most competent to form an intelligent and con-

¹ Gazz. med. Ital. Lomb., February 2, 1878, page 50.

² Lancet, April 21, 1876, page 562; Archives of Dermatology, April, 1878.

³ Schmidt's Jahrb., Bd. 180, Jahrg. 1878, No. 11, page 208.

⁴ JOURNAL, January 9, 1879, page 70.

scientific opinion advocate its reëstablishment: the police, for it kept vice within due bounds; the moralist, for publicity prevented prostitution, and registration afforded the opportunity of seeking and saving those who were not already lost, but only on the road to ruin; the physician, for venereal disease was notably decreased; and the scientific sanitarian, for protection was afforded to the innocent indirectly threatened by the very existence of disease.

In the tenth annual report of the Massachusetts State Board of Health, Dr. C. F. Folsom, in an admirable paper, says, "If control of syphilis and prostitution seems impracticable in the present state of our public feeling, there is at least one thing which should be done, and that is to give facilities for hospital treatment to the sufferers from venereal disease. In the opinion of the board, this need is now an urgent one in our State, which, if properly met, may be the means of doing great good. With all its noble charities Boston is an exception to the general rule of large cities, in that it does not properly provide for the treatment of the most contagious disease known, — one, too, in which the results are so far reaching and disastrous that they are often felt for a life-time, and in succeeding generations visiting the innocent frequently with greater severity than the guilty."

To the shame of Boston it must be said that at present for such disease there is neither a hospital nor yet even a ward in any general hospital in the city; and many suffering patients are actually refused admittance into existing institutions, and left to spread this most dreadful of maladies throughout the community. The demand for a hospital for this disease, or at the very least for wards and a thorough system of baths, increases daily.

(To be concluded.)

NEW YORK ACADEMY OF MEDICINE.

MARCH 30. *A New Classification of Pulmonary Phthisis.* — Dr. James R. Leaming read a paper entitled *A New Classification of Pulmonary Phthisis, with Practical Considerations.* The writer commenced by speaking of the tendency at the present time to rearrange, classify, and investigate with minuteness all forms of disease, and, after alluding to what had been accomplished in this respect for the group known as the "typhoid diseases," said that it was highly desirable that the same should now be done for the affections embraced under the term phthisis. As to the clinical features of ordinary pulmonary consumption, the graphic description of Sydenham, written two hundred years ago (which was quoted), was so perfect that little or nothing could be added to it. But of late much attention had been devoted to its pathology. Of the earlier investigators, Laennec had been of the opinion that almost without exception the various forms of phthisis were tubercular, while Broussais had held to the opinion of the ancients that they were of an inflammatory nature. Laennec's well-earned fame had been the means of tiding some errors down to

the present time; but during the last few years our modern pathologists, and particularly those of Germany, had clearly demonstrated that there were other forms than the tubercular, and the highest English and American authorities now taught this. In the course of a lecture on phthisis delivered at the Bellevue Hospital Medical College, December 10, 1878, Dr. Andrew Clarke, of London, divided it into three natural classes: (1.) The group in which the dominating anatomical element is what is called tubercle. (2.) The group in which the dominant destructive agent is some form of pneumonic exudation. (3.) The group in which the dominant element is some kind of fibroid tissue. Dr. Leaming said that he adopted this classification in part. The tubercular and fibroid forms were entirely different in kind, and were indeed to a great extent opposite diseases. As to the term "catarrhal pneumonia," now so much in vogue, it was made to include almost anything, and he did not approve of the name. The classification which he preferred was founded both on clinical observation and post-mortem study, and was as follows:—

Class I. Tubercular phthisis. First division, uncomplicated tubercular lung. Second division, tubercular lung, with fibroid pleura. Class II. Fibroid phthisis. First division, fibroid lung and fibroid pleura. Second division, fibroid lung and pleura complicated with tubercle.

Uncomplicated tubercular lung was doubtless quite rare, and the writer had distinct recollections of but three cases, of which no notes had been taken. Louis had said that nothing was so frequent in phthisis as adhesions of the lungs to the pleura, and Dr. Leaming had seen only two out of one hundred and twelve cases in which, at the autopsy, the lungs were found free throughout their whole extent. The only history of the first variety mentioned was such that the presence of the disease might easily be overlooked. The diagnosis was difficult, and not infrequently the first sign of trouble was when a cavity had been formed. It usually occurred in early adult life and in those exposed to hardships, poor food, and other depressing influences. At first the only auscultatory signs were some deficiency and slightly raised pitch of the respiratory murmur, unaccompanied with râles, and without any cough. When the tuberculous nodules were softening there were four, cough, expectoration, and the rest of the symptoms of phthisical trouble, and it was then that fatal hæmorrhage was liable to occur. The physical signs of a cavity were not so distinct as in fibroid phthisis, since the latter was surrounded to a great extent by healthy lung tissue, which was not a good conductor of sound, but the low pitch (especially in expiration) of cavernous respiration and other characters denoting its presence were usually not lacking. The case might perhaps end in general tuberculosis.

The treatment was mainly useful in the way of prophylaxis in those liable to the affection, and there was one remedy which seemed to have both preventive and curative qualities, namely, the chloride of ammonium. Quinine was of service as an anti-periodic, and other tonics, such as iron and cod-liver oil, were also useful: while stimulus in appropriate forms was also recommended, when well borne. Atropia was to be employed for the checking of night-sweats, and digitalis if the heart's action was weak and irregular.

Strapping the chest with adhesive plaster was often of great benefit, as was

also the application of small blisters, which sometimes had the effect of inducing adhesions, as in nature. In practicing forced expansion there was considerable danger of bringing on pneumorrhagia when there were new cavities present. Fatal hæmorrhage rarely occurred, however, when the cavity was a week old. Medicated inhalations were pretty sure to disappoint the expectation of both the physician and patient if much reliance were placed upon them, because the residual air in the lungs always resists the introduction of irritating vapors.

Where there were tubercular concretions following fibroid in the pleura (the second division of the first class of cases), fatal hæmorrhage was more apt to occur than in uncomplicated tubercular lung, although we would naturally expect it just as frequently in the latter. In consequence of the erosion of arteries, the patient was sometimes drowned in a few moments in his own blood; and this was not infrequently a great surprise to the physician as well as to the friends. Even if the medical man were on hand at the time, and all prepared to perform tracheotomy in order to relieve the air-passages until a clot might form, it was doubtful whether life could often be saved under the circumstances; and of course medication was of no avail, for lack of time.

Another accident which might happen (and which was also liable to be met with in cases belonging to the first division) was the occurrence of hydro-pneumothorax, from the softening of a concretion giving rise to an opening into the pleural cavity. This was always followed by great pain and dyspnoea, and was apt to result fatally at no distant date, although the patient might sometimes survive for months and even years. Recovery was rare after it. The indications in the treatment were to secure rest, relieve pain, and control inflammation; and, as in other forms of pulmonary trouble, strapping the chest was of great service. The first class of cases of phthisis was a grave one, but, fortunately, they were not nearly so frequently met with as those of the second class.

In fibroid phthisis the process in the lung was directly opposite to that seen in tuberculous phthisis; the one being a destruction of function only, while the other was a destruction of tissue. In the first division of fibroid phthisis (fibroid lung with fibroid pleura) the disease was quite amenable to treatment. It was frequently mistaken for tubercular phthisis, with cavity; and the writer believed, indeed, that nine tenths of all cases of phthisis commenced with interpleural plastic exudation. Hence it was of the utmost importance that treatment should always be begun as early as possible; and Dr. Leaning thought that the day was not far distant when the mortality from phthisis would be much less than it has hitherto been, on account of the more general recognition of these facts. Anything that tended to lower the vitality of the system might be a predisposing cause of fibroid difficulty. Thus, a faithful wife who had exhausted her strength by long attendance on a consumptive husband not infrequently became its victim, and it was the occurrence of such cases, he thought, which had principally given coloring to the supposition that phthisis was transmissible. Plastic exudation in the pleura, which was to be regarded as a safeguard of nature, was often immediately reabsorbed; but if it were not reabsorbed, it became organized, and the process went on extending. In the

second class the disease always commenced with fibrination of the pleura, and as this progressed, the air-sacs beneath were more and more pressed upon, and the chest itself contracting the patient gradually yielded, as though some strong anaconda were tightening its coils about him. Later, fibrous bands were formed through the lungs themselves, and the heart also became involved. At the autopsy a mass of fibroid tissue was often found gluing the heart and lungs together, and the former was sometimes so much displaced that the apex was found at the level of the fourth rib.

The early physical signs were the same in each division of the second class, and consisted principally of a slight "parchment-like" dullness on percussion and soft, tearing râles on auscultation. These râles might perhaps not be easily recognized by an unpracticed ear, but even a beginner would notice that the respiration was harsh, and if he would listen attentively (at the same time taking care to make his own breathing correspond with that of the patient) he would perceive that it was made up of distinct moist râles, very soft and frequent, beyond which might be heard the true respiratory murmur, like the distant roar of the sea. With such signs present, two facts would be evident: first, that there was an exudation in the pleura; and, second, that the lungs themselves were free. If the mistake were made of supposing that the trouble were simply bronchitis, and an expectant plan of treatment adopted, adhesions would be formed, and then still further exudation would follow, until the most serious consequences might result.

The treatment was easy enough at the beginning, but became more and more difficult as the case advanced, although even an exudation that had lasted several weeks might ordinarily be cured. It was recommended that the patient should take from six to ten grains of chloride of ammonium every waking hour, and should practice chest expansion, walk as much as possible in the open air, and live to a great extent on a milk diet. If this medication were not successful, the bichloride of mercury, in doses of about one twentieth of a grain three times a day, should be substituted for the chloride of ammonium, and kept up for several months. It had not only a good effect upon the pathological condition present, but also, the writer believed, quickened the appetite and increased the strength generally. But some cases would not yield even to such a course as this, and then it was advised that mercury should be given to the point of salivation, as the only thing that would offer a chance of saving the patient. The combination of calomel and Dover's powder was often of great service; but if the remedy were not well borne by the mouth, it should be applied externally, in the form of oleate of mercury. The careful use of mercury was regarded as most beneficial in these cases, in the hands of a skillful physician who knew how to use his tools. In the latter part of the last century Benjamin Rush used to cure patients of what he called the third stage of consumption by the use of a combination of calomel, nitrate of potassa, and tartrate of antimony; and Dr. Leaming said he had no doubt that these were cases of fibroid phthisis. Chest expansion, practiced perseveringly, should never be neglected, and a very good plan was for the patient to raise the arms over the head and then bring them down to the hips in such a way as to force the air into the lower part of the lungs. Accurate measurements

of the chest at different points and under different conditions as regards inspiration and expiration should be taken and recorded; and thus the patient would feel encouraged if he found that his vital capacity were increasing. One of the best of all the means for increasing chest expansion was probably riding on a fast-walking horse. Care should always be taken not to do violence to adhesions by too active exercise, which was apt to occasion pulmonary apoplexy. When this accident occurred, complete rest and strapping of the chest were recommended. The importance of climate was alluded to, and that was specially advised (as a rule) where there was a cool or cold air and a balsamiferous forest or an abundance of pine-trees, with freedom from malaria. If expansion of the chest were useful of itself, its benefit was greatly enhanced by a pure atmosphere. Cheerful amusement and good companionship were very necessary for the welfare of the patient, and in all cases change was of vital importance. That one would do best (other things being equal) who went to the most new places; and hence sea-voyages, the change from city to country, from mountain to sea-shore, and the reverse, would all prove of service. As a rule, men improved most where they had a chance to rough it in the open air, while women did best when they had the most congenial society. Fortunately, in this country, with the South, California, Colorado, the Adirondacks, etc., and but short voyages to Bermuda and the West Indies, we could have every variety of climate that was desired. If, in spite of all our efforts, the disease still persisted, it might be necessary for the patient to keep for a time to bed, where of course only limited chest expansion could be possible. By the use of proper stimulus, concentrated food (perhaps rectal alimentation), and the cautious administration of mercury, he might even then improve so that he could get about again.

In the second division of the second class (fibroid lung and pleura, complicated with tubercular concretions) the great proportion of cases were found. The disease was primarily fibroid, the tubercular element being adventitious. Niemeyer had said that the thing most to be feared in catarrhal pneumonia was that it might become tuberculous. This was certainly emphatically true of fibroid phthisis. When the tubercular element supervened, there were night-sweats, hectic, and all the well-known symptoms of advanced pulmonary disease; and the formation of a cavity was announced by the appearance of the characteristic expectoration. The physical signs were usually very distinct on account of the fibroid tissue in the lung and pleura, this being a good conductor of sound. After a cavity had been formed the patient might perhaps begin to sleep well and have an increased appetite; and if it so happened that the attending physician had been changed about that time, great injustice would probably be done to the one from whose hands he had passed. So, too, a number of quack medicines had gained great popularity because patients had chanced to be employing them just at the time that this improvement took place. It was seldom, however, that the relief was of long duration, or was so complete as might be inferred from the above, as other concretions were very likely to be undergoing softening at the same time. The condition of the cavity itself might be studied with advantage to the patient. Thus when the physician knew the connection of the latter with the bronchus, he could

often effectually prevent cough without being obliged to resort to opium for the purpose. Consequently he could instruct the patient to take such a position as would soonest evacuate the cavity. In 1863, Dr. Leaming said that he had had the honor of reading a posthumous paper upon this subject by the late Dr. Cammann. Cavities in the lungs were not, however, always of tubercular origin, as they might be due to fibroid or to gangrene, or else be of traumatic origin. Thus cavities had been known to result from paracentesis thoracis, gunshot wounds, bayonet thrusts, etc. But whatever might be the source of a cavity in a fibroid lung, its presence there was always of grave import, for the reason that it was very likely to become tubercular.

As to the treatment, this consisted in a judicious combination of the methods already suggested for both varieties of phthisis. Our supreme effort was to be to prevent the tubercular complication, where this had not already occurred; but if there were tubercular concretions present, then we were to aim at preventing the extension of either form of disease.

In fibroid phthisis the question of diet was always a matter of great importance, and the restriction of the patient to milk exclusively for a time, at least, was often followed by beneficial results. In some individuals it was necessary to form the habit of living upon a milk-diet, and but a small quantity could be taken at first. Carnivorous animals were, as a rule, lean, and had very small stomachs, and the same was true of meat-eating human animals; who were peculiarly liable to fibroid phthisis. It was probable that one benefit which large drinkers of ale, beer, etc., derived from the practice was the expansion of the stomach thereby gained, which was favorable to general nutrition. From two to three quarts of milk *per diem* should ordinarily be taken in these cases. The deposit of fat was to be regarded as positive assurance that the disease was held in abeyance, and when the patient was found to be increasing in flesh, therefore, he might be permitted to return to some extent to his ordinary diet. By way of counter-irritation small blisters were recommended; and as fibroid disease appeared to be the result of depressed vitality, everything likely to invigorate the vital forces was advised. Dr. Leaming said that he believed fully in the tonic effect of mercury in small doses, as well as in its utility in ridding the system of injurious products. Of course, care was always to be taken in its administration; but because this was necessary, and because it had often been abused, was no reason why it should not be employed. What was to be thought of a surgeon who was afraid of a sharp knife? Mercury had been well called the Samson of Medicine, and the writer believed that it was time that it should burst asunder the withes that had so long bound it, and once more put forth its mighty strength.

Prof. Austin Flint, having been called upon to open the discussion upon the paper, remarked that the classification suggested was a novel one, and that at present he was not prepared either to accept or to take issue with the views of the author. He was quite willing to acknowledge Dr. Leaming's zeal and industry in his investigation of the subject; but he felt forced to say that there was one part of it in regard to which he believed him to be in error, and that was his opinion as to the relations of pleurisy to phthisis. For his own part, he thought there was every reason to suppose that the former was ordinarily secondary to the latter; instead of phthisis being secondary to the pleurisy, as

the writer contended. In regard to the classification of phthisis, he thought there were two forms which could be considered clearly distinct, namely, acute tuberculosis and purely fibroid pulmonary disease. There then remained a third class of cases of chronic trouble, in which these two varieties were often found combined, and it was difficult to say just by what term the affection was to be designated. A great deal of confusion had been caused by nomenclature, and not only the beginner, but also the more advanced student of the subject, was apt to be very much perplexed by the multiplication of terms employed, and the lack of harmony in regard to their use among various authors. The point at issue he believed to be, in what way true miliary tubercle was to be regarded, and what was its relation to chronic phthisis, with softening, formation of cavities, etc. The views accepted in regard to this matter would to a great extent govern the observer in adopting a classification. Niemeyer's statement in regard to chronic catarrhal pneumonia (the equivalent of ordinary phthisis, as generally understood), which had been quoted by Dr. Leaming, seemed somewhat paradoxical; but there were undoubtedly numerous cases in which there was at first pneumonia, and afterwards the complication of tubercle. Whether the third class of chronic trouble mentioned could be divided into two distinct groups, *pneumonic phthisis* and *tubercular phthisis*, was a question; but it was, at all events true, as had been stated, that there were cases intermediate between acute tuberculosis and fibroid phthisis. Dr. Flint did not feel that at present he could conscientiously commit himself definitely in regard to so large and important a subject; and said that he preferred to wait until still further researches, based both upon clinical and histological data, had thrown more light upon it.

Prof. A. L. Loomis said that he had been both interested and instructed by Dr. Leaming's paper; but still it seemed to him that it must necessarily be very difficult to make any division of phthisis in which there should be no clashing of these essential points, namely (1) aetiology, (2) morbid anatomy, and (3) clinical history. The reason for this was that the best authorities were not yet in harmony in their views in regard to some of the most important and constant histological changes met with in chronic pulmonary disease. He did not understand very clearly what the writer meant when he spoke of "fibrination" of the pleura, or of plastic exudation undergoing organization; for there could be no doubt, he thought, that the plastic material undergoes absorption, while what is left as a result of the process is due to hyperplasia, or an increase of connective tissue in the part. If Dr. Leaming were right in his view that the pleuritic trouble anteceded the pulmonary, he thought it followed that great pathological changes must take place in the pleura before any evidence of their occurrence could be detected; for in a large proportion of cases important changes in the lung itself were discovered long before there was apparently anything abnormal about the pleura. Quite frequently bronchitis and peri-bronchitis, by means of which there was more or less plugging up of the tubes, preceded chronic consolidation of the lungs. This was the point at which Dr. Leaming would take issue with the accepted views of the profession, and it was a difficult matter to decide, for the reason that the post-mortem examinations necessary for the purpose should be made very early in any given case. When the disease was in an advanced stage, it was somewhat of an as-

sumption to say just where the process had commenced. Auscultatory signs were not to be relied upon, because the best authorities often differed entirely as to the significance of these in various affections. Dr. Loomis stated, in conclusion, that he agreed with Dr. Andrew Clark in his division of phthisis into three forms (a classification which, however, had been adopted here by many long before Dr. Clark's visit), and said that as far as he was able to form an opinion on the subject at present, it was more satisfactory to his mind than any other.

Dr. E. D. Hudson, Jr., thought that pleurisy must be recognized as one, at least, of the causes of phthisis, and said that almost every student soon noticed the connection of pleuritic adhesions with not only the later, but also the earlier stages of phthisis. Dr. Leaming had long been the advocate of the recognizability of distinctive and well-defined signs of interpleuritic exudation, and he himself had often had an opportunity of personally verifying his statements. In this connection he related a case in which the patient had had, ten years ago, an attack of pleurisy with effusion, without any evidence whatever of any trouble in the bronchial tubes or the lung itself, and yet to this day, when auscultation of his chest was practiced, fine, dry, crackling râles could be distinctly heard just under the ear. Attention was also called to the fact that pleuritic adhesions, without any disease of the lung at all, were very frequently found in autopsies, and it was considered highly probable that in a considerable number of such cases fibroid phthisis would have resulted had the patients lived. The pathognomonic sign of recent interpleural exudation, as pointed out by Dr. Leaming, was a subcrepitant râle, heard directly under the ear (in addition to the normal respiratory murmur beneath), and comparable to the tearing of a piece of wet cloth. For some time past he had been teaching his students thus to detect interpleural adhesions, and he believed that the more general recognition of these as a factor in the production of phthisis would in many cases throw no little light on the diagnosis, pathology, and treatment.

Prof. E. G. Janeway said that he remembered two cases in which acute disseminated tubercle had undoubtedly resulted from pleurisy, through a kind of septic infection, the *modus operandi* of which was as yet unexplainable. Without any previous trouble in the lung, there was an eruption of tubercle throughout the body following the interpleural trouble. That phthisis was ordinarily to be ascribed to the effect of pleurisy, however, he did not believe. To him it seemed evident that autopsies distinctly showed that the disease in the lung was the older of the two where both are coexistent; if the observations were made in those portions where the process was more recent. In the vast majority of cases, therefore, he thought the phthisis could not be ascribed to antecedent interpleural adhesions. As to pure fibroid of the lung, he believed it to be a very rare condition. If, however, by fibroid was meant a thickening of connective tissue associated with the presence of lymphoid cells, it was sufficiently common. In regard to tubercle, while pathologists were not in harmony as to what constitutes its histological characteristics, and there was still much confusion of the terms used in connection with it, there seemed to be at present a strong current of opinion back towards the view that tubercle was really of much more frequent occurrence than had been for a time supposed. In the last edition of Niemeyer's work there was a considerable mod-

ification of the opinions held by that author when he wrote it, and Rindfleisch, it was noticeable, went back further towards the former position held upon the subject than any other authority. It was probable that there was as a rule more of tubercle in phthisical lungs than Virchow had been in the habit of teaching, and the speaker imagined that even Virchow was now modifying his former views to some extent. Coming now to the subject of acute miliary tuberculosis, he believed that there was still much to be learned in regard to it, and stated that he had often been surprised at its peculiar manifestations. Only during the last few days, while making an autopsy in the case of a patient who had been suffering from disease of the heart and aorta, and in whom no pulmonary disease had been suspected, he found a cheesy bursa upon the thigh, which led him to make a full examination of the various organs, when he found an eruption of miliary tubercle throughout both lungs, the kidneys, the liver, and all the rest. Cheesy bursae were also discovered over each trochanter and in various other localities. Such cheesy collections were supposed to be the origin of tubercle, but they were not always to be found. In this case during life only a few râles had been heard, and the temperature had never gone above one hundred; while at the autopsy the tubercular deposit in the lungs was found so generally diffused that it could only have given rise to the ordinary signs of bronchitis. The experiments of Roberts and others in inoculating rabbits with the sputa of tuberculous patients are of interest as apparently going to show that tuberculosis was allied to other infectious diseases. Dr. Janeway thought that at present we could not decide on any definite classification of phthisis, based on either histological or clinical study; but for his own part he had been driven to look at the disease from the standpoint of where the trouble was found to commence. Thus, we had (1) tuberculosis beginning at the apex, (2) infiltration of consecutive parts of the lung, and (3) infiltration of the whole lung to start with.

The president, Dr. Fordyce Barker, regretted that the different speakers had not devoted some attention to the subject of treatment, since some novel therapeutical views had been advanced by the author of the paper, and said that he would like to inquire how Dr. Leaming got his patients to take ten grains of chloride of ammonium every hour, to which the latter replied that he sometimes prescribed the remedy simply in water, sometimes in carbonated water, and sometimes with syrup of wild cherry, and that he found no difficulty in giving it.

HEALTH, LUNACY, AND CHARITY.

THE bill to abolish the State Board of Health and the Board of State Charities, and to create a State Board of Health, Lunacy, and Charity, has passed to its final stage in both branches of the legislature, and will probably become law, just as the twentieth state board of health, established on the Massachusetts principle, is created in Delaware. We have already given the essential provisions of the new bill, and have expressed our decided disapproval of it. It was opposed in the house of representatives very ably indeed by Hon. Chas. J. Prescott, of Boston, to whom the thanks of the medical profession and the Board of Health are due for his generous appreciation of their services; and a

very decided opposition to the consolidation was manifested, but the crack of the party whip brought the political forces enough into line to carry the measure through by a vote of two to one.

It is useless to regret the matter now, or to bewail the fact that Massachusetts has given up its position as a leader among the States, with the mistaken view, we think, of stealing General Butler's thunder in the next election. The governor has the appointment of the members of a new board, the creation of which he has very strongly urged. If he uses his rare privilege wisely, it will still be possible to make the new arrangement a means of doing great good, although, in our opinion, a better plan might have been and should have been adopted. Without doubt the governor's ear has been open, in the consideration of this subject, to men whose presence in any important board would be regarded by many persons as a public calamity, although it is not known how great their influence with him is; and there are many men and women who "like that kind of work" who make up for mental weakness by lingual activity, and who would be as ready to take places on the new board as they are incompetent to fill them. Still, there are enough good men in the State, and we are told that it is the intention of the executive not to interfere with the usefulness of the Board of Health, but that it is his hope rather to widen its sphere. If he can wisely combine three so distinct works in one commission, and can succeed in getting able, discreet, and highly honorable persons to perform that vast amount of service gratuitously, without curtailing the work of the Board of Health, and at the same time provide for the supervision of insane asylums and successfully administer the state charities without the faults of the present system, he will deserve the greatest credit.



MEDICAL NOTES.

— In view of the prevalence of scarlet fever at Newport, R. I., Dr. H. R. Storer has called the attention of the board of aldermen to their neglect of sanitary precautions in that town. He says the board has refused to transfer its powers to a competent board of health; children of infected families are allowed to attend public and private schools; open funerals are permitted, and alleged defects in the construction of the sewers are not corrected.

NEW YORK.

— At the recent special meeting of the County Medical Society, held for the purpose of discussing the responsibility of the medical profession for the abuses of free medical services, one of the speakers related the case of an applicant at one of the dispensaries who demanded that he should receive attention before his regular turn, on the ground that he had a carriage waiting outside for him at the rate of a dollar an hour. Another told of a man, apparently in the most abject poverty, who was received as a free patient in the Manhattan Eye and Ear Hospital, and, while an inmate of the institution, died from an attack of pneumonia; yet when his clothing was examined after his death, the sum of fifteen hundred dollars was found in his pockets.

— Madame Gerster, the distinguished prima donna of the Mapleson com-

pany, very kindly consented to sing at a concert given in aid of the German Hospital and Dispensary at Steinway Hall, a day or two before her departure for England, and as there was a very crowded house (it being her farewell appearance in America) a handsome sum must have been realized for the charity.

CHICAGO.

— At the last meeting of the Chicago Medical Society — the annual meeting — by a unanimous vote a committee was appointed to memorialize the new mayor to hold the health department apart from political influences, to have it conducted in the interest of the health of the people, and to retain in office Dr. De Wolfe for his ability and efficiency as a health officer.

— At the annual meeting of the Chicago Medical Society, Dr. Edmund Andrews was elected president and Dr. R. G. Bogue vice-president.

— The uncertain and undefined reference of a correspondent to certain animadversions upon Dr. Jackson, as printed in the *JOURNAL* of April 3d, certainly does injustice to that gentleman. There have been in the papers no animadversions on Dr. Jackson except in regard to his difficulties with the managers of the Woman's Hospital of the State of Illinois. Of that difficulty there are two differing accounts, and, like many other questions that have positively two sides, perhaps it is not worth disputing about. Dr. Jackson has ended the controversy by promptly resigning from the hospital.

WASHINGTON.

— The select committee of the house of representatives on the origin, introduction, and prevention of epidemic diseases in the United States consists of Messrs. Young, of Tennessee, Gibson, Hooker, Goode, Morse, Smith, of Pennsylvania, Updegraff, of Ohio, Van Aernan and McGowan.

— In the senate April 12th, in the consideration of the legislative appropriation bill, the clause authorizing the secretary of the interior to prescribe regulations under which cattle affected with the disease of pleuro-pneumonia may be seized, appraised, and slaughtered, and payment therefor made out of moneys appropriated, was discussed at some length with respect partially to the probable powers of the National Board of Health in this particular, and was finally accepted as modified to the effect that the committee on agriculture be instructed to consider the propriety and necessity of legislation to check the introduction and spread of contagious diseases among domestic animals, etc.

— Congress has now passed bills which define more clearly and positively than before the duties and powers of the National Board of Health, giving them authority to request the detail of a medical officer by the president to serve in the office of the consul at any foreign port, to inspect and furnish certificates to ships departing for the United States, making a heavy penalty to ships sailing without the same; gives them authority to make all needful rules and regulations for the prevention of the introduction into and spread within the United States of contagious or infectious diseases, and charges them with the execution of the same; requires weekly sanitary reports to them from consular officers, state and municipal sanitary authorities, and that the board shall publish weekly abstracts of such reports, to be furnished to the medical officers of the marine hospital service, collectors of customs, and state and

municipal health officers and authorities, and further an annual report to the secretary of the treasury for transmission to Congress. Power is given to select stations and erect temporary buildings for necessary disinfection on all lines of inter-state commerce and travel; to call upon local officers and boards to enforce its rules, etc., and in case of refusal to obtain a detail from the medical staff of the army, navy, or marine hospital service for the purpose; to investigate the contagious or infectious diseases of domestic animals, and the best means of controlling or preventing such diseases, and to have thoroughly inspected all imported or exported cattle with proper recommendations. For the carrying out of the provisions of the act, the president is authorized to detail officers from the several departments of the government for temporary duty, without additional compensation save for necessary expenses, and \$650,000 is made the appropriation. Section 13 reads, "nothing in this act shall be so construed as to supersede or impair any sanitary or quarantine law of any State."

ST. LOUIS.

—The annual convention of the District Medical Society of Northwest Missouri met at St. Joseph on the 10th inst. It was attended by members of the profession from Missouri, Iowa, Kansas, and Nebraska. Papers were read on Uterine Hæmorrhage by Dr. W. J. Heddens, and on Irritability of Muscular Fibres by Dr. D. I. Christopher.

—It has been decided to build at St. Joseph the state asylum for the insane, which is to take the place of the one which was destroyed by fire some months since.

HONORS TO PROFESSOR GROSS.

MR. EDITOR, — Samuel D. Gross, M. D., LL. D., D. C. L. Oxon., professor of surgery in the Jefferson Medical College, formerly presiding officer of the American Medical Association, and afterwards president of the International Medical Congress, having now for more than half a century devoted himself to the active duties of his chosen profession, in which, by force of native ability, strong determination, and unflagging industry, he has become preëminent as an operator, a teacher, and an author, was recently tendered the compliment of a public dinner by his professional friends from all parts of the country. The banquet was given at the St. George Hotel, Philadelphia, and was commemorative of his having completed his fifty-first year in the practice of medicine. It was thought of one year ago, but was then postponed on account of a great domestic bereavement, and it was only at the solicitation of his personal friends that he finally consented to accept the distinction on the present occasion. This event, from the rare opportunity that inspired it, the high professional and social standing of those who united in the testimonial, and the honorable sentiments that prevailed, and of which it was the spontaneous and tangible expression, is, perhaps, without a precedent in the history of American medicine. The ovation that was proffered Professor Gross in company with Prof. Joseph Pancoast, in October, 1868, upon their return from their European tour, was an exceptional honor as an expression of esteem by their fellow-citizens in Philadelphia; but many circumstances conspired to make the pres-

ent occasion far more significant and impressive, — the crowning honor of a long and successful career.

While the movement originated in Philadelphia, it was not restricted to this place, but the leading members of the profession in Pennsylvania, New Jersey, and Delaware were invited to participate, and these States were largely represented. Invitations were also sent to prominent physicians in different parts of the Union, and some who were present traveled more than a thousand miles in order to be present, a sincere compliment that was especially grateful to the guest of the evening. Among those present were Professors Benjamin Silliman of Yale College, David W. Yandell of Louisville, Theophilus Parvin of Indianapolis, and R. Beverly Cole of California: Austin Flint, James R. Wood, A. C. Post, Lewis A. Sayre, Austin Flint, Jr., Dr. George F. Shrady, Nathan Bozeman, and A. M. Asch, of New York; Drs. Van Bibber and Smith, of Baltimore; Surgeons Otis and Basil Norris, U. S. A., of Washington; and many of the prominent physicians of Pennsylvania. Prof. D. Hayes Agnew presided at the board, and among the other Philadelphians present were Professors William Pancoast, J. Aitken Meigs, Robert E. Rogers, William Goodell, James Tyson, Harrison Allen, Drs. Thomas S. Kirkbride, Albert H. Smith, Elwood Wilson, John H. Brinton, William Thompson, E. B. Gardette, A. Fricke, S. W. Gross, and J. Haller Gross, Esq. The appointments and conduct of the affair gave general pleasure and satisfaction, and were in the highest degree worthy of the committee of arrangements, consisting of Drs. D. Hayes Agnew, Thomas G. Morton, R. J. Levis, and J. Ewing Mears.

The banquet room was decorated with living ornamental plants, the chandeliers were wreathed in smilax, and large plaques of cut flowers were seen upon the tables. The floral decorations were very handsome, and during the evening the guests were entertained by choice music by Carl Sentz's orchestra.

The table at the upper end of the room, at which sat Professor Gross surrounded by the prominent guests of the evening, was extended by wings so as to form three sides of a parallelogram. Covers were laid for one hundred and sixteen, and nearly that number were present. At each plate was placed a menu on white satin, headed as follows: —

1828 — 1879.

SAINT GEORGE HOTEL.
COMPLIMENTARY DINNER

TO

PROFESSOR S. D. GROSS, M. D.,

In Commemoration of his Fifty-First Year in the Medical Profession.

April 10, 1879.

The guests sat down about eight o'clock, and at eleven Dr. Agnew announced that the first part of the exercises were at an end, and offered the first toast, Our Honored Guest, and in chosen words extended to Professor Gross the congratulations of the professional gentlemen surrounding the board, and reviewed some of the changes that had taken place during the fifty-one years that he had been actively engaged in the duties of his profession, and rapidly sketched the prominent scenes and incidents in this long and useful career. In concluding his remarks the chairman said: "It only remains for me to attach to the lapel of your coat in token of our good wishes, this little decoration, which is the gift of your friends who sit around this board, and to give

you this book, which contains the names of those who have so kindly participated in this ceremonial. It may serve to set before your mind at some future date, when you have laid aside the active duties of life, the events of this evening; may it also lead your sons to emulate the noble virtues of their sire."

The medal was of good size, and the design was in excellent taste. It was of gold, having the initials S. D. G. set in diamonds on one side, and on the reverse this inscription:—

PRESENTED
TO
DR. S. D. GROSS
BY
HIS MEDICAL FRIENDS,
IN COMMEMORATION OF HIS
FIFTY-FIRST YEAR
IN THE PROFESSION.
APRIL 10, 1879.

In rising to respond, Professor Gross was greeted with prolonged applause and was evidently deeply affected. He finally said: "Mr. Chairman and Gentlemen, — In rising to respond to the toast offered by the distinguished chairman, I feel deeply oppressed by what Dr. Rush has so well described as 'suffocated excitement.' You need not be assured how much I appreciate the honor conferred by the occasion and by this warm reception. The sentiments embodied in the toast touch my heart, and I should indeed be dead to all the finer feelings of my nature if I did not tender you my most cordial and respectful acknowledgments. It is no light compliment to be in such a presence or to be the guest of such a company. To merit the approbation of my professional brethren and of good men generally has ever been my highest ambition, as it must be of every honest and virtuous citizen. The offer of a public dinner, extended to me a few weeks ago by a committee of my professional friends, took me completely by surprise, and would probably have been promptly declined if it had not been accompanied by such kind and flattering words as at once to satisfy me that they came from the heart. The commendations which you have bestowed upon my private character and public services as a practitioner and teacher of surgery are measured, I am conscious, rather by your own generous feelings than by any deserts of mine. Whatever value those services may possess, it is no ordinary consolation to me to know that they are appreciated by men among whom I have lived for nearly a quarter of a century, with many of whom I have been brought into frequent contact in the various relations of life. — often, indeed, under circumstances of a most trying kind, — with some of whom I have been officially associated, and with none of whom, thanks be to God, I have ever had one word of misunderstanding.

"It is not a pleasant thing to speak of one's self, but there are a few circumstances in the history of my not uneventful life to which I may perhaps be pardoned for referring upon this occasion. I have grown old in the profession, as pupil and practitioner for fifty-four years, my graduation dating back to March, 1828. A little over one month ago I closed my thirty-ninth course of lectures on surgery. If to these thirty-nine years be added two years spent as dem-

onstrator of anatomy in the Medical College of Ohio, and four years passed in the medical department of the Cincinnati College as professor of pathological anatomy, it will be perceived that my life as a public teacher extends over a period of forty-five years. During all this time it has been my good fortune to miss few lectures, either from sickness or any other cause. If my teaching has not always been of the best quality, it has been as good as I knew how to make it. Whatever estimate may have been placed upon it by those who listened to it, I can solemnly declare that it has always been earnest and conscientious, with an eye single to the interests of my pupils, the truths of medical science, and the honor and dignity of the profession. On no occasion have I entered the amphitheatre without due preparation. One of the great objects of my early professional life was to qualify myself for the occupation of a public teacher. This idea, which haunted me as I sat upon the hard benches of my alma mater, like the demon of Socrates, gave me no rest day or night. My first effort in this direction was made in this city, at the Franklin Institute, in the spring of 1830, the subject being general anatomy, a branch of study then little understood or cared for in this country. The effort, however, proved to be an abortive one. The novelty of the subject, my own inexperience, and the paucity of students in the city at that season of the year were the causes of my failure. Finding practicing and lecturing in so large a city to be uphill work, I removed to Easton, in this State, whence, after two years and a half spent in earnest work, I went in 1833 to Cincinnati as demonstrator of anatomy in the Medical College of Ohio. From this institution, after a service of two years, I was called to the chair of pathological anatomy in the Cincinnati College, in which I gave the first regular and systematic course of lectures on that most important branch of anatomy ever delivered in this country. In 1840 I was invited to the chair of surgery in the University of Louisville. In 1850 I became the successor of Dr. Valentine Mott in the University of New York, but returned, after the close of the session, to the school in Kentucky. In 1856 I accepted the chair of surgery in my alma mater, unanimately tendered me by its honorable board of trustees.

* Having been thus actively engaged for so many years as a public teacher, it is not surprising that my pupils should be scattered over the country, while not a few of them are successfully practicing in foreign climes. Upwards of five thousand diplomas bear my signature. Of the thirty-seven colleagues with whom I have at various times been associated, twenty-six have fallen by the wayside, for the most part ripe in years and full of honors, leaving eleven survivors, among others Willard Parker, Austin Flint, and John W. Draper, of New York, Benjamin Silliman, of New Haven, and our distinguished townsman, Joseph Pancoast, — five men of whom any profession in any country might justly be proud. It has been said that youth is a blunder, manhood a struggle, and old age a regret. If this be true I have not realized it in my own person; nor need it be true of any one who is true to himself. Struggles of some kind or another are almost the inevitable lot of every man who is not born with a silver spoon in his mouth. I certainly had mine, but they were the struggles of early life, and I thank God for them, for they taught me patience and perseverance and self-reliance, and were powerful aids in developing character. These struggles did not discourage me. On the contrary, I felt as

Sheridan did when he made his maiden speech in the British House of Commons, — that it was in me and would come out of me ; or, as Erskine expressed it on a similar occasion, I felt as if my children were tugging at my coat, and urging me on to industry and perseverance that I might supply their necessities. A brave man never yields to despair. His motto is *Perseverantia omnia vincit*. This has been my motto, and whatever success I may have achieved is due to persistent effort and to a definite aim in life, without any faltering or misgiving in regard to the final issue. I have never lost sight of the fact that what a man soweth he shall reap, or that ‘if the spring show no blossoms, autumn will show no fruit.’

“Much has been said about the inspiration of genius. The greatest efforts that have been made at the forum, in the pulpit, or in the senate, in ancient or modern times, were the result of hard study and patient labor. Patrick Henry, William Pinckney, Rufus Choate, and others like these never made a great argument or a great oratorical display without preparation, and the same is true of every profession and every pursuit. After fifty years of earnest work I find myself still in the harness ; but although I have reached that age when most men, tired of the cares of life, seek repose in retirement, and abandon themselves to the study of religion, the claims of friendship, or the contemplation of philosophy, my conviction has always been that it is far better for a man to wear out than to rust out. Brain work, study, and persistent application have been a great comfort to me, as well as a great help ; it has enhanced the enjoyment of daily life and added largely to the pleasures of the lecture-room and of authorship ; indeed, it will always, I am sure, if wisely regulated, be conducive both to health and longevity. A man who abandons himself to a life of inactivity after having always been accustomed to work is practically dead.

“In taking a retrospect of my life I have no regrets. I console myself with the belief that I have not lived wholly in vain, and that, while much remains undone that might and should have been done, it might be reasonable to suppose that at least some of the seed which I have sown have produced good fruit. It is not given to every man to be a Harvey, a Hunter, a Jenner, a Bichat, a Morton, a Paget, or a Virchow. ‘By the grace of God,’ says St. Paul, ‘I am what I am.’ No man can rise superior to himself. What is fame ? Is it a phantom, or is it a reality ? Alas ! too often the former, too seldom the latter. Few medical works, however meritorious, outlive their authors, and no sooner does a teacher retire from the field of his labor than his pupils worship other gods. Happy, thrice happy, is he who in the evening of his life, as he reviews his past conduct, can say to himself, ‘I have been true to my profession. I have been ambitious of its glory ; I have done nothing to tarnish its escutcheon.’ As I look back through the dark vista of half a century, what memories crowd upon my mind ! Kingdoms have crumbled to pieces ; new dynasties have sprung up ; the world has been drenched in blood by contending armies ; millions of human beings have been swept away by pestilence and famine ; civilization, commerce, the arts and sciences, religion, and education have found new homes ; the uttermost parts of the globe have been explored by intrepid navigators and adventurous travelers ; time and space have been annihilated by the telegraph ; and the employment of steam and the ap-

plication of machinery have changed the occupations of man, and thrown upon us a surplus population which the wisest statesmen know not how to dispose of. The art and the science of medicine have been completely revolutionized and enriched to an extent which fifty years ago would have baffled the wildest conceptions. During these vast changes, so pregnant in beneficence to mankind, America has not been idle. If she had contributed nothing more to the stock of human happiness than anæsthetics the world would owe her an everlasting debt of gratitude. The fanciful and mischievous speculations which characterized medicine in the days of my youth have been replaced by sober facts, founded upon more carefully conducted observations and more rational deductions. In preventive medicine a new field has been opened which, if properly explored and cultivated, as it seems destined to be, will add millions of years to the life of the human race. Oh for a glance at the profession a century hence, when man, enlightened and refined by education and redeemed from the thralldom of ignorance and superstition, shall reflect more perfectly than he now does the image of his Maker!

"I thank you, Mr. Chairman, and you, gentlemen, who have honored me with your presence here this evening, for the patience and attention with which you have listened to my rambling remarks. Allow me, before I take my seat, to wish you, one and all, prosperity and happiness, and to drink your health with a heart brim full of gratitude for the many favors that have been showered by my professional brethren upon me."

Upon taking his seat the speaker was loudly cheered and applauded, the entire company rising and drinking to the sentiment, "Many years yet to the distinguished chief."

The remaining toasts were, Welcome to our Guests, humorously offered by Professor Rogers, and responded to by Prof. D. W. Yandell, who claimed Professor Gross as the foster-son of Kentucky, and assured him of the unwavering attachment of his people for their friend and their old master.

Professor Gross with much emotion said: "My illustrious pupil, carry my best respects back with you to the people of that State, and assure them of my undying attachment to the men and women, and most of all their homes. After an absence of nearly a quarter of a century my heart quickens at the recollection of my early home among them. May God preserve Kentucky and its warm-hearted people!"

The toast of Medical Education was responded to by Dr. Traill Green, of Easton. Professor Post, of New York, was called upon to respond to the toast of American Surgery. The sentiment of The Army and Navy was awarded to Dr. Basil Norris, who responded briefly in a very neat speech. The final toast of Old Memories was renamed Auld Lang Syne, to which Professor Siliman, of Yale, responded in a finished address.

A number of complimentary letters, regrets, and telegrams were read by Dr. Mears, after which the gentlemen adjourned to the parlors for smoking and social converse. Early in the morning the assemblage broke up with feelings of the utmost satisfaction, nothing having occurred to mar the harmony of one of the most enjoyable and impressive celebrations that has ever taken place in the City of Brotherly Love.

SHORT COMMUNICATIONS.

THE MARINE HOSPITAL SERVICE.

MR. EDITOR,—In your issue of April 3d appears an article purporting to be a reply to "Efficiency," in regard to the transfer of the marine hospital service to the navy department. Instead of reviewing the question fairly, the writer made a most uncalled-for and untruthful attack upon the medical and other officers of the navy. He states that there are three and a half seamen to one officer in the navy. If the gentleman will take the trouble to examine the navy register he will see his error. There are twelve thousand five hundred and ninety-one officers and men in the navy and marine corps who are at present entitled to medical treatment from the medical officers of the navy. The law allows one hundred and eighty officers to perform this duty; thus the proportion of surgeons is one to sixty-nine and ninety-five hundredths men. Besides those regularly in the service, there are about five thousand employees at the various navy yards and stations who are entitled to medical attendance from the surgeons attached to the respective stations. The gentleman states, upon the authority of a politician, that the expense of treating patients in naval hospitals is enormous! The naval hospital at New York is one of the largest in the service, and usually contains from seventy-five to one hundred patients. The sum allowed by the bureau of medicine and surgery for the entire running expenses of this hospital during 1878 was only four thousand four hundred dollars. As to the antiquity of the marine hospital service, of which the gentleman boasts so loudly, he must admit that age did little to develop it. During the last few years several energetic and able men, who deserve much praise, have wrought a great and beneficial change in the service, but over the seventy years during which politicians used it as an asylum for degenerate friends and relatives a veil had better be drawn.

E.

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 12, 1879.

Cities.	Population estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from					
				The Principal "Zymotic" Diseases.	Pneumonia.	Diphtheria and Croup.	Scarlet Fever.	Diarrhoeal Diseases.	
New York.....	1,085,000	471	22.63	16.35	11.46	3.82	5.09	0.85	
Philadelphia.....	—	286	—	14.65	9.44	4.54	4.54	1.75	
Brooklyn.....	564,400	211	19.49	17.54	8.53	6.64	6.16	0.92	
Chicago.....	—	150	—	20.00	10.00	10.00	6.00	1.33	
St. Louis.....	—	105	—	9.52	7.62	2.86	—	—	
Baltimore.....	365,000	134	19.14	18.65	13.43	2.98	4.48	2.24	
Boston.....	360,000	151	21.86	13.91	15.23	5.93	2.65	2.65	
Cincinnati.....	—	108	—	31.48	13.89	1.85	18.62	5.66	
District of Columbia...	160,000	82	26.72	—	—	3.66	2.44	—	
Cleveland.....	—	65	—	12.12	16.67	3.03	1.26	—	
Pittsburgh.....	—	55	—	21.43	17.86	7.14	1.79	—	
Milwaukee.....	—	46	—	30.43	10.87	28.91	2.17	—	
Providence.....	101,000	37	19.10	24.32	8.11	5.41	13.51	2.70	
New Haven.....	60,000	14	12.17	14.28	—	—	—	—	
Charleston.....	57,000	25	22.85	12.00	4.00	4.00	—	—	
Nashville.....	27,000	13	25.08	—	—	—	—	—	
Lowell.....	53,300	20	19.56	25.00	15.00	5.00	10.00	—	
Worcester.....	52,500	21	20.85	14.29	—	4.76	—	4.76	
Cambridge.....	51,400	22	22.31	18.18	18.18	4.55	—	—	
Fall River.....	48,500	19	20.43	10.53	—	—	—	5.26	
Lawrence.....	38,200	19	25.94	26.32	10.53	26.32	—	—	
Lynn.....	34,000	13	19.94	30.77	—	15.38	7.69	—	
Springfield.....	31,500	9	14.90	11.11	—	—	11.11	—	
New Bedford.....	27,000	8	15.45	37.50	—	25.00	—	—	
Salem.....	26,400	7	13.83	28.57	14.28	14.28	—	—	
Somerville.....	23,350	9	20.10	22.22	—	—	—	—	
Chelsea.....	20,800	7	17.55	42.86	—	42.86	—	—	
Taunton.....	20,200	—	—	—	—	—	—	—	
Holyoke.....	18,200	16	45.84	6.25	—	—	—	—	
Glenroster.....	17,100	4	12.20	—	—	—	—	—	
Needham.....	17,100	5	15.25	—	20.00	—	—	—	
Haverhill.....	15,300	—	—	—	—	—	—	—	
Newburyport.....	13,500	6	23.17	16.67	—	—	16.67	—	
Fitchburg.....	12,500	1	4.17	—	100.00	—	—	—	

* Not reported.

Two thousand one hundred and forty deaths were reported: 368 from consumption, 360 from the principal "zymotic" diseases, 215 from pneumonia, 118 from diphtheria and croup, 104 from scarlet fever, 84 from bronchitis, 36 from whooping-cough, 29 from diarrhoeal diseases, 28 from typhoid fever, 18 from cerebro-spinal meningitis, 17 from erysipelas, 14 from measles, one from small-pox (unvaccinated foreign child), showing a decrease from acute pulmonary diseases and erysipelas, an increase from chronic pulmonary diseases, typhoid fever, whooping-cough, and especially measles, while the mortality from all diseases, from all pulmonary diseases, and cerebro-spinal meningitis remains about the same, the change not being considerable in the diseases not specified. From *bronchitis* 22 deaths were reported in New York, 15 in Brooklyn, nine in Philadelphia, eight in Boston, six in Chicago, five in Cleveland and Cambridge, three in St. Louis and Cincinnati, two in Baltimore, one in Pittsburgh, New Haven, Lowell, Fall River, Lynn, and Newton. From *whooping-cough* 18 in New York, five in Brooklyn, three in Baltimore, two in Boston, Cincinnati, and Cambridge, one in Cleveland, Pittsburgh, New Haven, and Salem. From *typhoid fever*, seven in Philadelphia, six in Baltimore, four in St. Louis, three in New York, two in Chicago and Milwaukee, one in Brooklyn, Cincinnati, Pittsburgh, and New Haven. From *cerebro-spinal meningitis*, two in New York, Philadelphia, Chicago, St. Louis, Boston, and Lowell, one in Baltimore, Cleveland, Providence, Charleston, Somerville, and Holyoke. From *erysipelas*, five in New York, three in Cincinnati, two in Philadelphia, one in Brooklyn, St. Louis, New Haven, Cambridge, Fall River, and New Bedford. From *measles*, five in Pittsburgh, three in Cleveland, two in New York and Baltimore, one in Brooklyn and Worcester. From *malarial fever*, five in New York, three in St. Louis. From *remittent fever*, two in Brooklyn. From *catarrhal fever*, one in Baltimore; from *fever*, one in Cincinnati; and from *small-pox*, one in New York (first this year). From *trismus nascentium*, one in Charleston. Scarlet fever and pulmonary diseases remain prevalent in Richmond, diphtheria and pulmonary diseases in San Francisco, and pulmonary diseases in Louisville. There is an increase in the mortality from "fevers" in Buffalo, Richmond, and Louisville; a marked decrease in Savannah and New Orleans. Vessels arriving at Boston and Baltimore from Rio were found to have had deaths from yellow fever during the passage; both were removed to quarantine. In seventeen of the nineteen cities of Massachusetts, with an estimated population of 845,350, there was a decreased mortality from pneumonia and typhoid fever; about the same from diarrhoea and measles, and decreased from the remaining "zymotic" diseases and consumption. The weather was generally reported changeable, with rain and high winds; somewhat warmer.

Sergeant Pursell's meteorological record for the week, in Boston, is as follows:—

Date	Barom-eter.	Thermom-eter.		Relative Humidity.		Direction of Wind.			Velocity of Wind.			State of Weather.			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7 A. M.	9 P. M.	Daily Mean.	7 A. M.	9 P. M.	7 A. M.	9 P. M.	7 A. M.	9 P. M.	7 P. M.	Duration in Hours.	Amount in Inches.
April 6	29.67	55	60	24	75	16	53	48	W	W	W	6	8	12	F	C
" 7	29.80	41	52	31	70	40	50	55	SW	W	SW	4	21	12	F	F
" 8	29.87	47	57	33	61	28	48	45	NW	NW	W	17	16	1	F	C
" 9	29.81	49	60	34	55	27	41	40	W	W	N	12	19	10	F	O
" 10	29.71	55	65	35	71	30	95	82	E	E	N	12	20	2	O	R
" 11	29.60	55	62	38	77	38	77	71	N	N	N	11	15	8	O	S
" 12	29.85	35	44	30	68	36	53	51	NW	NW	NW	14	25	7	F	C

Weekly Summary.	Barometer.	Thermometer.	Humidity, Saturation being 100.		Wind.	Rain.
	Mean 29.863	Mean 59.3	Mean 56.7		Total miles traveled, 2244	Total amt. 1.33 in.
	Max. 30.068	Max. 69	Max. 100			
	Min. 29.451	Min. 24	Min. 16		Prevailing direction, W.	Duration, 17 hrs. 30 min.
	Range .617	Range 55	Range 84			

Barometer corrected for temperature, elevation, and instrumental error.

Explanation of weather symbols: O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., snow or sleet; L. S., light snow; T., threatening.

Station: Latitude $42^{\circ} 21'$; longitude $71^{\circ} 4'$; height of instrument above the sea, 77.5.

For the week ending March 22d, in 149 German cities and towns, with an estimated population of 7,448,862, the death-rate was 27.9, an increase of 0.7 from the previous week. Of the infectious diseases, scarlet fever had decidedly increased and diphtheria diminished. Pulmonary diseases were much more fatal, the changes in the other diseases not being very considerable. Three thousand nine hundred and ninety-nine deaths were reported: 665 from consumption, 499 from acute diseases of the respiratory organs, 169 from diarrhoeal diseases, 149 from diphtheria and croup, 62 from scarlet fever, 58 from typhoid fever, 51 from whooping-cough, 30 from measles, 24 from puerperal fever, 16 from typhus fever, none from small-pox. The death-rates ranged from 18.2 in Potsdam to 42.2 in Strasburg; 25.2 in Dantzic, 30.6 in Breslau, 39.3 in Munich, 29.3 in Nuremberg, 23.0 in Dresden, 27.0 in Berlin, 23.2 in Leipsic, 22.9 in Hamburg, 28.5 in Bremen, 31.5 in Cologne, 30.2 in Frankfort-on-the-Main.

For the week ending March 29th, in the 20 English cities having an estimated population of 7,383,999, the death-rate was 28.2, an increase of 1.0 from the previous week. Diseases of the respiratory organs and whooping-cough continue excessively prevalent and fatal, the latter diminishing; scarlet fever increasing, small-pox in London and diphtheria decreasing. Three thousand nine hundred and ninety-two deaths were reported: 687 from diseases of the respiratory organs, 149 from whooping-cough, 107 from scarlet fever, 46 from fever, 46 from measles, 36 from diarrhoea, 15 from diphtheria, nine from small-pox. Dublin continues to have a high mortality from small-pox. The death-rates ranged in the 23 cities of the United Kingdom from 17.8 in Brighton to 33 in Dublin, 18 in Edinburgh, 25 in Glasgow, 29.9 in London, 26.4 in Birmingham, 25.6 in Liverpool, 29.9 in Manchester, 23 in Portsmouth.

Fevers and small-pox continue to prevail in India, small-pox, fevers, and diphtheria in Paris and Budapesth, diphtheria and fevers in Italy, small-pox and diphtheria in Vienna, and small-pox with an increase of fevers in St. Petersburg. Typhus fever still prevails in parts of Russia and Turkey, decreasing in those few places in Germany where it assumed an epidemic form, in Odessa and Warsaw, as well as in St. Petersburg, unusual symptoms appearing. No new cases of the plague have been reported on the Volga, where the vigorous sanitary measures taken are in striking contrast to the apathy in most of our Southern cities, whose sanitary condition, so far as we can learn, has not been materially improved since last summer.

SUFFOLK DISTRICT MEDICAL SOCIETY. — The annual meeting will be held at the hall, 19 Boylston Place, on Saturday evening, April 26th, at seven and a half o'clock. Reports of committees. Election of officers. The following papers will be read:—

Dr. James Ayer. A Partial Review of Two Thousand Cases of Midwifery.

Dr. Walter Channing. Care of the Insane in Massachusetts.

Dr. E. H. Bradford. Treatment of Deformities from Infantile Paralysis.

Dr. B. Joy Jeffries. Statistics of Color-Blindness in this Community; Color-Blind Vision.

Supper at nine o'clock.

THE GYNÆCOLOGICAL SOCIETY OF BOSTON. — The next regular meeting—one hundred and second—of the society will be held at Medical Library Rooms, 19 Boylston Place, on the first Thursday of May, at two o'clock P. M. Paper by H. M. Field, M. D., on Concealed Pregnancy complicating a Diseased Uterus. Profession invited.

HENRY M. FIELD, M. D., *Secretary*.

THE AMERICAN ASSOCIATION FOR THE CURE OF INEBRIATES will hold its tenth annual meeting in New York city, at the hall of the Young Men's Christian Association, May 13th and 14th, commencing at ten A. M. Very important papers will be presented.

APPOINTMENT. — Dr. C. E. Woodbury has been appointed assistant port physician in place of Dr. J. B. Swift, appointed port physician.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

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LECTURES.

BOSTON CITY HOSPITAL: CLINICAL LECTURE NO. XIII.

BY DAVID W. CHEEVER, M. D.,

Professor of Clinical Surgery in Harvard University.

Amputation of the Lower End of the Rectum. — GENTLEMEN: We have here a German, between fifty and sixty years of age, who, during the past year or two, has been suffering from some affection of the rectum, which has developed gradually, and, as you see, is principally confined to the margin of the anus, and just inside the sphincter muscle. During the winter I have been able to show you most of the common affections of the rectum, but this is a new and rather uncommon variety. You see about the rectum ulceration which has eaten down into the bowel; there is also a deep-seated hardening of the tissue. Here are rings of this consolidated tissue, — which we never find in fissure, — and they extend for half an inch up the bowel. There is nothing here resembling piles, the symptoms of which are familiar to you. The question lies between a cancerous and a syphilitic affection. But to me it seems to be epithelioma, which is rare in this locality, but which upon the lip is common. The tissues at one point have given way, and the disease has infiltrated beneath them. In ordinary cancer the bowel feels smooth around it, but the finger detects a hard, knobbed, irregular wall, created by disease, and situated beneath the mucous membrane, between the latter and the muscular coat. What have we to do here? If the disease were on the lip we should cut it out; in another place we should use caustics. Here it seems to me better to cut around the epithelioma and remove it. To do this will involve the excision of both the sphincter muscles and a portion of the bowel, and, consequently, you may think the patient will lose power over the bowel, and that hence incontinence will result. But after the operation a contraction of the cicatrix takes place to such a degree that we sometimes are obliged to introduce bougies in order to dilate the entrance to the bowel. There is besides, higher up, a contraction of the so-called “third sphincter,” which aids in the control of the rectum.

I have seen Langenbeck remove this species of growth by means of

a spoon-shaped instrument, invented by Simon. The removal of the disease by the knife, it may be thought, might injure the peritonæum, but this membrane does not descend low enough to be endangered. It comes down only as far as the prostate gland, — besides, you will remember the ischio-rectal fossa, which is at least one and one half inches in depth on either side of the rectum, and of course the levator ani muscle is above the fossa, — so that the danger of involving the peritonæum seems slight. The disease is unequally distributed. Near the sphincter it is developed in shape of a ring, but does not extend high up, being mostly confined to and about the margin of the anus, although in places it is more wide-spread, and on the right side ridges and spurs run up the bowel over an inch. I make my incision a little irregular, because I do not wish to remove more skin than is absolutely necessary. At one point, however, where the ulceration runs more deeply, I have cut farther back. The mucous membrane above the seat of the disease I carefully protect, so that when the operation is completed I can draw it down and fasten it to the margin of the anus. Having now removed all of the diseased tissue, I introduce sutures at equal distances from each other into the mucous membrane of the bowel, and by their help I shall bring down the membrane. Bleeding is quite moderate, the source being principally the smaller vessels. I now find that the mucous membrane has been cut off so high up that it seems doubtful as to whether we can do much in the way of stitching, but we will make the attempt. I have done so, thus bringing two raw surfaces together, and giving the most favorable conditions for healing to a certain degree, but I do not suppose the parts will hold together. On the right side, at a point where the membrane was cut very high, it has already given way, but three fourths of the rectum are stitched down, and the part looks well. For after-treatment the opening will be packed with oiled rags and sponges.

Needle in the Knee-Joint. — This young woman, during the past five months, has had trouble in the right knee-joint. It dates from the time when, as she asserts, she accidentally forced a needle into her leg near the knee, the end breaking off. She has had frequent synovitis, and on four occasions incisions have been made and the needle sought for, but as yet it has not been found. Over the lower edge of the patella is an exquisitely tender spot, which is caused either by diseased cartilage or by the needle. The inflammation which is apparent involves no risk to her, for the trouble seems to be outside of the joint. Here are the scars of four other operations. The joint does not appear to be either much enlarged or inflamed. The patient has been very unfortunate, having already lost one leg. I know nothing of the history or cause of the amputation, but it was well done, and the stump is a good one. The patella, as usual in knee-joint amputations, has been removed.

I now make a crucial incision directly over the patella, and at once find a bit of loose cartilage which moves upon the patella, but whether it be the cause of the pain of which the patient has complained I do not know. I intend to go further and discover the real condition, for this is the fifth time the patient has been laid up by an operation, and this is her only leg. I shall, if necessary, even open the capsule of the joint, but shall do so under the carbolic spray. I now apply ice for five minutes, to check bleeding and give us an opportunity to search. Cutting carefully down into the capsule, I have struck almost at once upon the needle at the lower edge of the patella, where it stands directly upright, and points with the sharp end backward between the tibia and the femur. As I draw it out it comes in a perfectly vertical line, and it is in this upright posture that it has excited and kept up synovitis in the joint. The explanation probably is that the needle has worked about until it finally assumed a position in which it could be reached. It is fully four fifths of a cambric needle. The hardened tissue about it simulated cartilage, and therefore led me to suppose that the loose, movable body first mentioned was a bit of that substance.

We shall apply a ham splint and the Lister dressing.

Excision of the Wrist. — Early in December last this man was brought into the hospital with a ragged wound in the left hand, caused by a pick-axe, which had been driven through the ulnar side of the hand, breaking and carrying away a section of the fifth metacarpal bone. You have often seen the case. We etherized him, removed the comminuted bone, and every effort has since been made to save the hand; but in spite of this the whole wrist-joint and carpus have passed into a pulpy, carious condition. I proposed to amputate the hand. The patient objected. Hence I shall substitute an operation by which I shall remove the carpal bones wherever they are diseased. Before the Esmarch bandage was applied the hand was dusky red in color and very much deformed by swelling. The probe passes across the hand and under the wrist-joint, every bone of which is thoroughly diseased. The operation will be a matter of slow gouging and gradual picking away the carious bone.

I make two free incisions over the metacarpal bones of the index and ring fingers respectively. To avoid the palmar vessels I do this on the back of the hand. The tissue between the incisions can be easily pushed aside, thus enabling me to work freely. I now find the bones in such a crumbling condition that I shall make very free incisions and dissect out everything. The carpal bones come out, some in fragments, some whole, but in a badly diseased state. The carpal end of the radius has pushed down nearly one and one half inches through the softened carpal bones, and is so seriously diseased that I shall cut off a portion. This being done, I also remove the end of the ulna and the

heads of the metacarpal bones. We now have a space some two inches wide between the hand and the fore-arm entirely void of bone. The extensors and nerves of the back of the hand are almost uninjured. The palmar structures are not interfered with. The wound is to be packed, compressed, and done up with a Lister dressing, and kept on a splint. If he recovers, a firm, plastic exudation will take the place of the carpal bones. This will stiffen into ankylosis. The use of the fingers is to be restored by flexion and manipulation. If things go on badly the hand will have to be amputated.

Foreign Body removed from the Larynx by Laryngo-Tracheotomy.— I now show you this little girl of three and one half years, who on Monday evening, while playing with an oval tin stamp, taken from the covering of a parcel of fine-cut tobacco, got it impacted in her throat, out of reach. The foreign body was a flat plate, three fourths of an inch long and five eighths of an inch wide.

Immediate and progressive symptoms of spasmodic croup set in.

The accident occurred on the Cape, one hundred miles from Boston.

The croupy cough and spasm of the larynx continued on Tuesday; on Wednesday she was brought to Boston by her physician, Dr. Stone, of Wellfleet, and I saw her at noon, thirty-six hours after the accident.

She was brought to the hospital and etherized. The throat was explored with the finger, but nothing could be felt. Tracheotomy was then performed, after which the tracheal incision was held open, and search made for the foreign body. It was detected in the larynx, but was so impacted that it could neither be drawn down or moved. A soft-rubber trachea tube was inserted. Portions of its horizontal plate were then cut away, to avoid covering the larynx. Next, the incision in the trachea was extended up through the cricoid cartilage and between the thyroid cartilages in their entire length, until the whole larynx was laid open in the middle line. The piece of tin was found in the glottis and removed. The thyroid and cricoid cartilages were reunited by two silver-wire sutures, the trachea tube being left in position, and the child was put into the steam room. She did well, and made a perfect recovery.

The tube was taken out on the fifth day, the wire sutures on the seventh and eighth days. By the sixteenth day the cut had closed by granulation. On that day, and eleven days after tube was removed, the child spoke distinctly, with a shrill, doll-like voice. She will go home to-day, on the seventeenth day after the operation.

THE POST-MORTEM DIAGNOSIS OF CERTAIN FORMS OF ASPHYXIA.¹

BY E. W. DRAPER, M. D.

CASE II. *Asphyxia by Suffocation*. — This case presents fewer difficulties than the one preceding, inasmuch as we have some knowledge of the circumstances attending the death. R. Y., a middle-aged man, in the full vigor of robust health, occupied a room on the upper floor of a four-storied building. In this room he worked at his trade of harness-making through the day and lodged at night. He was the only occupant of the building at night, the other tenants being engaged in the manufacture of clothing, and in other day work, on the lower floors. From the windows of the second story of this building fire was seen to burst forth suddenly a little after five o'clock in the morning of Sunday, January 20, 1878. Those who first saw the fire were certain of its very abrupt origin, though they could not testify that there was an explosion previously. Coincidentally with the appearance of the flames, a man was seen to leave the building, and to run down an adjacent street; this man, the probable incendiary, effected his escape. The fire was extinguished in less than an hour, and as soon as possible the premises were inspected. It was found that the damage to the building by the fire was limited almost wholly to the second story, its place of origin. Elsewhere there was an extraordinary deposit of sticky soot, with a pervading odor of naphtha or illuminating coal-gas. It was found, moreover, that all the tips had been unscrewed and removed from the gas fixtures on the second story, and that the gas had been turned on in full force. In the fourth story the dead body of Y. was found lying across the threshold of his room, as if he had fallen in an ineffectual attempt to escape. The body was only partially clothed, and the portions of clothing in place had evidently been arranged hastily. The deposit of soot and the stench of gas were particularly noticeable in the entry-way and rooms of this fourth story. An autopsy was made twenty-nine hours after the discovery of the fire, and presumably about the same interval after the death of its victim. Externally all the exposed parts of the body, the face, neck, hands, and feet, were densely blackened with very tenacious soot. The hair and clothing were similarly smutted, the soot being of a moist or greasy character, and emitting a penetrating and persisting odor of illuminating gas, like that observed in the room of the deceased. No part of the body showed any evidence of burn. On the dependent parts of the body especially, and to some extent on the upper portions also, were patches of post-mortem lividity, faint in outline and pink in color. There was no sign of putre-

¹ Concluded from page 567.

faction. The jaws were firmly set, and the tongue was in normal position behind the teeth. There was no froth at the lips or nostrils. The lips and gums were blackened with soot. The eyelids were partially opened, the pupils were semi-dilated, the cornea was dull. Rigor mortis was unusually marked. Upon exposing the muscles of the chest walls and abdomen their bright, florid, vermilion color was immediately noticeable and striking. The heart was fully distended on its right side; the left ventricle was empty and firmly contracted. Anatomically the heart was normal; its color was bright red. The pericardium contained an ounce and a half of clear, straw-colored fluid; the blood throughout the body, arterial and venous alike, was uniformly fluid in consistency and of a lobster-red color. The lungs, externally, were of a pinkish-gray tint, with numerous small points of a darker color, from two to three millimetres in diameter, the so-called capillary ecchymoses of Tardieu. On section the lung tissue was uniformly bright red in color, rather dense, with only moderate crepitation on pressure, and exuding numerous points of fluid blood from the cut vessels. The odor of coal-gas was distinct. The trachea, larynx, and bronchi contained mucus in a condition of coarse froth, abundantly mixed with soot down to the smallest branches. The mucous lining of the air-passages was injected and of a florid color. The deposit of soot was manifest in the pharynx, in the upper part of the œsophagus, and on the tongue. The peritonæum was fully injected, the vascular distribution showing finely in all its parts. The kidneys and liver were hyperæmic, the kidneys especially so. The spleen was enlarged and of a cherry-red color; its section exuded blood freely. The stomach presented its muscular coat thrown into prominent folds or rugæ; its mucous membrane was injected, at the fundus especially. There was a single spot of submucous ecchymosis. The organ was empty. The intestines presented various degrees of hyperæmia, from uniform pink injection to distinct submucous extravasations. The bladder was moderately distended with clear urine; its mucous membrane was somewhat injected. The scalp exuded blood freely on section. The vessels of the dura mater were distended with cinnabar-red blood. The vascular meninges were engorged. The lateral ventricles of the brain were empty. The choroid plexus was bright red and prominent. The puncta cruenta were abundant and carmine colored.

Reviewing and summarizing these post-mortem appearances, we have : (1.) Well-marked cadaveric rigidity, with entire absence of putrefactive change, twenty-nine hours after death. (2.) Abundant deposit of a peculiar soot on the surface of the body, and in the mouth, pharynx, and air-passages. (3.) Post-mortem lividity of a peculiar color. (4.) Universal fluidity of the blood. (5.) Uniform vermilion color of the blood. (6.) Hyperæmia of the lungs. (7.) Hyperæmia of the right

side of the heart and of its vessels, afferent and efferent, with vacuity and contraction of the left ventricle. (8.) Capillary ecchymoses under the pulmonary pleura. (9.) Froth in the larynx, trachea, and bronchi, with injection of the mucous membrane. (10.) Injection of the abdominal viscera, especially of the kidneys. (11.) Hyperemia of the brain and of its meninges.

This assemblage of cadaveric signs could leave one in little doubt that the death of this man was due to asphyxia by suffocation. Entirely consistent with this view is the engorgement of the right cavities of the heart and of all the important viscera. The kidneys were unusually injected, a condition which Casper emphasizes as peculiar and constant in death by asphyxia. Especially valuable as diagnostic signs are the fluid condition of the blood, the injection of the mucous membrane of the air-passages, the presence in those passages of mucous froth mingled with soot, the formation of capillary subpleural ecchymoses. All these appearances mean the arrest of the mechanical functions of the lungs, quickly eventuating in a destruction of the chemico-vital processes performed by these organs. The suspension of these necessarily involves, in a very brief space, a cessation of the heart's action and of the functions of the brain. It is death beginning at the lungs by a partial or complete exclusion of respirable atmospheric air. Of these various phenomena that of ecchymoses on the surface of the lungs has received much attention at the hands of judicial pathologists. Tardieu has given the subject special study, and it is his belief that this appearance is peculiar to this form of death. It is a sign of great value and prominence in the lungs of infants suffocated. But that this sign is exclusively and constantly applicable as a test of death by suffocation is denied by some observers,¹ who insist that, while it is nearly uniform in this mode of death, it is to be found also in the bodies of those who have perished by other forms of apnoea, and even in still-born infants killed by interruption of the placental circulation. Occasionally, the punctiform extravasations are observed on other surfaces, the pericardium, the aorta, and the diaphragm, but their most frequent and abundant development is on the surface of the lungs and on the thymus gland. Their number varies from a few disseminated points to a number so great and so distributed as to give rise to concrete patches, though this latter degree is very rare. Their size varies from that of a small pin's head to that of a split pea. They are true ecchymoses, and are due to the rupture of the capillaries from over-distention occurring, according to Lukomsky, when ineffectual efforts at expiration continue.

But the fact is readily recognized that we not only have here the acknowledged signs of death by suffocation, but that at least one of these signs determines for us a special form of suffocation. The peculiar

¹ Simon, Moschka, Bohn, Ogston.

abnormality in the appearance of the blood affords a basis for the conclusion that the death was the result of blood-poisoning as well as of apnœa. Instead of the usual condition of the blood in asphyxia, the predominance of the venous character, we have a bright, cinnabar-red color everywhere present, in arteries and veins alike, giving to the various tissues and organs a remarkable appearance, and indicating the action of carbonic oxide gas introduced to the system through the lungs. If there were no other evidence, this sign alone would guide us to a decision that this man, just before his death, had inhaled this peculiarly noxious agent in fatal amount. In point of fact, however, the condition of the gas fixtures in the building, the presence of the unmistakable odor of illuminating gas, and the abundant deposit of a characteristic soot correspond very fully with this extraordinary anatomical change, and readily indicate the source of the carbonic oxide which contributed to the fatal result. One is thus provided amply with data for a diagnosis of the cause of the death, and of the probable sequence of the attendant circumstances. A reasonable theory is that the incendiary, having the satisfaction of an old grudge in view, entered the building, as it was proved that he could easily do, and fired it by letting on the gas as fully as possible in the second story, and providing a means of ignition sufficiently slow in action to enable him to escape. The gas gradually diffusing in the building reached Y.'s apartment. Awakened by the odor, he left his bed hastily, and opened the door of his room; at the threshold he was met by a greatly increased amount of the asphyxiant gas, and was prostrated thereby. In this situation the carbonic oxide, supplemented presently by the great rush of soot and smoke, the building being now on fire, quickly finished its work of suffocation.

The behavior of carbonic oxide gas in the system, whereby its poisonous effects are manifested so strikingly on the blood, is still a question involved in some obscurity. Recorded cases of asphyxia from this cause have not been so numerous as to deprive new instances of the quality of novelty. I have not been able to find any reported cases in which the gas produced its fatal results in the fashion here described. Generally the asphyxia has proceeded from the inhalation of charcoal vapors, a favorite method of suicide in France. Occasional cases of the accidental admixture of illuminating gas with the air of inhabited rooms have occurred with fatal effects, and a few instances are recorded in which lime-kiln vapors have caused death by this form of asphyxia.

Various theories have been advanced in explanation of the mode of action of carbonic oxide in the blood, and to account for the peculiar and permanent change produced thereby in that fluid. Bernard,¹ impressed by the great contrast in the appearance of the blood between

¹ *Leçons sur les Substances Toxiques*, page 164.

cases of carbonic acid poisoning and those of poisoning by carbonic oxide, declared that in the former class the venous blood is prevented from becoming arterial, while in the latter class the arterial blood cannot become venous. Other authorities, Klebs and Lehmann, for example, consider that carbonic oxide acts like a narcotic on the organs of the central nervous system, producing an atony of the muscular coat of the blood-vessels, and so stasis and hyperamia. But the generally accepted view among toxicologists and physiologists is that the carbonic oxide gas, inhaled and presented to the circulation through the lungs, enters into a stable combination with the haemoglobin in such a way and to such a degree as to render the blood incapable of sustaining life. The quantity of carbonic oxide required to kill is difficult to estimate. Many experiments on animals have been made, and the amount of the gas necessary to produce fatal poisoning has been carefully studied from that point of view. Thus Tourdes¹ proved that one part of the gas in seven of air killed rabbits in seven minutes. Leblanc's and Dumas's experiments show that air containing so small a proportion as one per cent. of the gas will kill a dog in one minute and a half, and that birds will die instantly in an atmosphere containing five per cent. But to reason from these artificial experiments on animals to human subjects would be manifestly unsafe. It is well established by observation that there is considerable difference in predisposition in different individuals, some persons, for reasons that are quite obscure, exhibiting a complete immunity on exposure. Children perish in the presence of the gas more quickly than adults.

While the change in the color of the blood, as described, is truly diagnostic of carbonic oxide suffocation, the absence of that sign does not exclude this form of asphyxia. The following is an illustration of this exception: A young woman took a lodging-room in a hotel in this city. She retired at half past seven in the evening, the gas in her room having been lighted for her beforehand. Nothing more was known of her until one P. M. of the following day, seventeen and a half hours later. The chambermaid was then attracted by the smell of gas in the entry, and going to the door of the girl's room she heard low moans within. Help being called, the door of the room was forced. The windows and all other openings in the room were found closed, and the chambermaid and her companions were nearly overcome on entering. The stop-cock of the gas fixture was found to be turned so that gas escaped freely. The lodger was comatose, livid, breathing heavily, and with a moaning expiration. There were no convulsions. Medical help was summoned, and active efforts were made to stimulate the patient. The breathing improved temporarily, and the skin became more natural, but consciousness was not recovered, and the patient sank steadily and died.

¹ Woodman and Tidy's Handy Book of Forensic Medicine, page 557.

At the autopsy, nine hours after death, post-mortem lividity upon the upper as well as the dependent parts was well marked. Froth escaped from the nostrils, and was found filling the air-passages. The mucous membrane of the bronchi was injected, and of a reddish-brown color. Section of the lungs showed marked incision of those organs, the color being dark. There was venous engorgement, the right cavities of the heart were distended, the left ventricle was moderately contracted. The blood was fluid and of a dark, almost black, color in all parts of the body, in marked contrast with the florid, lobster-red color in the case of Y.

RECENT PROGRESS IN SYPHILOLOGY.¹

BY EDWARD WIGGLESWORTH, M. D.

*Relations of Syphilis to the Public Health.*² — Dr. Sturgis, of New York, in a pamphlet read at the annual meeting in Philadelphia, November, 1874, tabulates the statistics upon syphilis in the armies, navies, and civil hospitals of the leading nations, and arrives at these conclusions: —

I. Syphilis is probably widely spread and possibly increasing in extent. This opinion, from the imperfect means at our disposal, must for the present at least remain more or less conjectural.

II. The question of the fatality, so far as the acquired form of the disease goes, may be answered in the negative, but the excessive mortality in the congenital variety renders it serious and alarming. One cause of consolation remains, however; that is that the disease does not probably extend to the third or fourth generation, usually dying out with the second, nor does it usually transmit any specially vitiated vitality to the later descendants of the original sufferer.

III. Acquired syphilis is comparatively harmless and congenital syphilis fatal in their influence over the course and development of other diseases. The danger to the public health lies more in the transmitted than in the acquired disease, and whether this be permanent and dangerous, or only temporary and remediable, must remain for future investigation to determine.

Finally, the defective registration of this class of cases should be remedied.

*Nature, Origin, History, and Public Prophylaxis of Venereal Diseases, and the Doctrines of Syphilis.*³ — Dr. Kennard, of St. Louis, calls attention to the fact that syphilis is rare in countries where polygamy is practiced, and considers that venereal diseases originate from the pro-

¹ Concluded from page 573.

² H. Truss, Jr., 15 New Church Street, New York, 1877.

³ Reprint from St. Louis Medical and Surgical Journal, July, 1878.

miscuous indulgence of females, one woman receiving in a short time the embraces of several men, a transgression of nature's laws by the female. Syphilis is mostly prevalent among the highly civilized, Christian people, because their females are taught to believe that a loss of chastity cancels every good trait in their nature, and compels them to make beasts of themselves; and yet society is so organized that women can barter their bodies for money and men will pay for sexual gratification. While this is so women will indulge indiscriminately, venereal disease will be propagated, and all that can be done is to keep prostitution under control. If the blind prejudices of preachers against the practical control of prostitution, which has never been checked in the slightest degree by their efforts, could be counteracted, and the strange and unnatural desire of certain females to interfere with the control of that evil could be checked, we might not only control syphilis, but prevent a vast deal of crime and misery which originates from unrestricted harlotry. Acton, of London, in an essay read as long ago as 1873 before the British Medical Association, stated that "without an intimate acquaintance with the laws of syphilis no one can venture to legislate on what are now known as contagious diseases; the passage of acts bearing upon those diseases must be attributed to the attention which has been called to the frequency and severity of syphilis. On sanitary grounds, twenty-seven hundred medical men have during the last session urged the continuance of these acts." In fact, no one now contests the beneficial influence of their operation on public health. The acts have a moral tendency; the disease may perhaps be stamped out.

"What a contrast between these twenty-seven hundred fearless English physicians, proclaiming their honest opinions, and the hundreds of time-serving American practitioners, who, although they knew that the social-evil law was the best law ever enacted for the purpose of controlling prostitution, opposed its enforcement from considerations of policy! — being afraid to support an act which not only regulated the worst of all evils, but relieved the honest portion of our community from the expense of supporting harlotry with all its horrible consequences. Let the preachers and physicians and pusillanimous legislators who succeeded in having our social-evil law repealed join hands with their misguided sisters and congratulate each other upon the present flourishing condition of prostitution in St. Louis; upon the immense expense which they have saddled upon our taxpayers without sense or reason; upon the protection and encouragement that they have afforded prostitutes; and upon the general diffusion of venereal disease throughout our city!"

*Immunity of certain Mothers of Children affected with Hereditary Syphilis.*¹ — Dr. Hyde, of Chicago, in a paper read at the first annual meeting of the American Dermatological Association, presents the following suggestions: —

¹ Reprint from Archives of Dermatology, April, 1878.

"I. That if the possibility of the occurrence of conception without maternal infection be admitted, it follows that direct infection of the wife by the husband may occur at any subsequent period of the gestation. Hence the date of appearance of maternal syphilis cannot be urged in support of the so-called 'syphilis by conception.'

"II. That inasmuch as the blood of the husband is capable of transmitting the disease directly to his healthy wife, the non-contagious character of the lesions exhibited by the former cannot be urged in favor of his innocuousness during the pregnancy of the latter.

"III. That many of the physiological and pathological phenomena of pregnancy render it highly probable that syphilis of the mother should exist without external manifestations; there being further evidence of the fact that puerperal and scarlet fevers and erysipelas in the human female, as well as spontaneous vaccinia and equinia, are contagious diseases, connected with and often originating in abnormal puerperal conditions.

"IV. That the mode of development of the fertilized ovum demonstrates the phase of its physiological independence of the maternal organism, the placenta discharging a respiratory function and presenting an effectual barrier against intra-uterine infection.

"V. That there is evidence to show that not only trichinae, but various other poisonous organisms are incapable of transmission through the placental parietes; and that the proofs of such transmission in the case of the exanthematous fevers, and variola in particular, cannot be considered as fully established.

"VI. That the full weight of Colles's law is to be estimated in connection with the question whether the child whose hereditary syphilis is derived from the mother exclusively is capable of infecting its healthy father; and if no instance of this latter can be adduced, a higher law becomes defined, namely, that the child whose hereditary syphilis is transmitted by one parent only is incapable of infecting either.

"VII. That if such immunity be established, it is probably due to the fact that the syphilis-bearing cell element cannot readily be implanted upon the soil from which it sprang, — a fact illustrated by the infecundity of consanguineous marriages and the non-auto-inoculability in general of the primary lesion of syphilis."

Late Hereditary Syphilis. — Dr. I. E. Atkinson reports¹ the case of a girl aged sixteen, who had obstinate "sore throat" at nine years of age, and two years ago ulceration with loss of bone from the hard palate, and a pimple on the upper lip, which, after cauterization, spread rapidly over the nose and both cheeks. In a year's time the nasal septum was entirely destroyed. About a year ago cicatrization began, while elsewhere the disease was spreading steadily though irregularly.

¹ American Journal of Medical Sciences, January, 1879, page 71.

White precipitate ointment alone had been of any benefit. Both parents show evidences of constitutional infection. The spread of the disease was too rapid for lupus, and the ulcer of the skin was preceded five years ago by pharyngeal ulceration, whereas lupous affections of the mouth and fauces are contemporaneous only with lesions upon the skin, and usually directly continuous with these. Destruction of bone (hard palate) is certainly very rare in lupus. The disease yielded speedily to iodide of potass internally, and white precipitate ointment externally. The recognition of the nature of the disease in this case at an early period would have resulted in prompt and complete arrest of the disease process, whereas at present a dreary and joyless future at best is all she can hope for.

“Late hereditary syphilis, even of very grave character, may occur in individuals who during infancy suffered from symptoms of their inherited disease, so mild and unimportant as to escape recognition.” A review of the recorded cases of late hereditary syphilis reveals an astonishingly large proportion of lesions of the character just referred to. Vide Lancereaux, Laschkewitz, Klink, Wilks, Levin, Dron, Chaboux, Ziessl, and many others. Even, then, should there fail the notched teeth, the signs of interstitial keratitis, past or present, the flattened bridge of the nose, the linear cicatrices of the mouth, and the protuberant forehead, yet, if a patient who has never acquired syphilis presents destructive lesions, or their remains, of the pharynx and fauces, of the hard and soft palates, or of the nasal cavity, the possibility of inherited syphilis should be, at least, borne in mind.

Dr. Bulkley read ¹ before the American Dermatological Association, September 6, 1877, two cases of very late hereditary syphilis: I. A girl, aged twenty-three, but not looking more than thirteen, was brought in consultation for treatment for lupus. The usual signs of inherited syphilis were present. No early manifestations. The first evidence was a gummous formation upon the arm, nine months previously. The mother admitted syphilis, and, what is worth far more, showed clear evidences of having had the disease prior to the birth of this child. The disease yielded to specific treatment. II. Mrs. H., aged twenty-four, had at five years of age a deep sore near the ankle, lasting five months, and leaving a scar. At seven years of age a tubercular eruption appeared, and has continued ever since. Gradual absorption of the centre of the frontal bone without external ulceration has been going on since she was sixteen. “A sister, aged thirty, has the same eruption, and her sister’s children are also affected.” Until lost sight of this patient was improving under specific treatment.

¹ Archives of Dermatology, April, 1878, page 123.

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Responsibility of the Medical Profession for the Abuses of Free Medical Services. — At the last regular monthly meeting of the society, March 24th, a paper on the above subject, which had been presented to the New York State Medical Society at its late meeting in February, and by it referred to the various county societies, was read by Dr. F. R. Sturgis, house physician to the New York Dispensary. The abuses referred to were so notorious, he said, that it was scarcely necessary to do more than glance at them. In the report of the committee on the abuses of medical charities appeared the following sentence: "In fact, the number of persons receiving such [dispensary] aid in this city has been estimated at from 250,000 to 300,000 in a year, and it was stated at a meeting held April 12, 1877, that from thirty to thirty-five per cent. of the whole population of New York was receiving medical advice gratuitously." He claimed that it was the doctors who were in the main responsible for this abuse, as but for their acquiescence in it it could not exist for one day, and said that he had often been surprised in conversing with physicians to see the absolute apathy which some of them exhibited on this subject. The trustees of the various dispensaries, he believed, were, as a rule, ready and willing to listen to reasonable remonstrances from their medical men, and in cases where these were treated with indignity it was but too often the doctors' fault. "A man seldom receives insult," said he, "except he has brought it upon himself, and the meekness with which many medical men stand prepared to pocket kicks if they can get a desired appointment, the haste with which they rush for place, the wire-pulling, log-rolling, and pipe-laying which go on in order that a position may be obtained, tend to disgust any board of trustees, and to lower its estimate of the medical profession. And small blame to them! It would seem incredible, but from actual observation, how almost impossible it is to get medical men to pull together in any question which concerns their common good where they have to give up some private interest; but such, I believe, is fully the fact, and trustees of public institutions, knowing this, usually ignore medical men in questions where, from their special knowledge and training, they would be eminently fitted to give advice."

Dr. Sturgis then went on to speak of the plan pursued by the New York Dispensary, which was the first of this class of institutions in the city to exact any payment from patients. In May, 1876, it began charging its male venereal patients the sum of ten cents for each prescription, and in the following month its female venereal patients, with the understanding that the medicine should be furnished gratis to those really unable to pay. The percentage of paying patients in these two classes was of males ninety, and of females fifty; and at the end of the year the sum thus derived amounted to \$617.93. In 1877 the percentage increased respectively to ninety-five and seventy-seven, and the amount of money received was \$1007.05. In April, 1878, the same rule was extended to all classes attending the dispensary, and by December 31st the total amount received was \$3472.25; the percentage of paying patients of those charged being of males ninety-five, and of females ninety-three. Although in the New York and some of the other dispensaries care was taken to exclude all those

who were able to pay a physician, there was nothing to prevent these institutions from competing directly with the doctors. That this might occur was by no means an idle fear, since one of the large and rich hospitals (the New York) was already actively engaged in the cheap medical business, taking any and every patient, irrespective of position or money, for a small monthly stipend, and without having the grace to pay its medical men for their services. Yet the latter seemed to acquiesce in this arrangement as a matter of course. He believed sincerely that unless the medical profession got some control over this question of public medical charities, the public charities would get control of the profession: and he trusted, therefore, that the profession, by some united action, would insist upon a thorough and radical change in the management of these charities. It was a favorable time for such interference, because even the non-professional public was now waking up to the existence of the abuses referred to, and he felt sure that the State Board of Charities would heartily coöperate with medical men in the correction of them.

There were two points particularly to which strenuous opposition should be made: first, the increase of free dispensaries; and, second, the use of public moneys for the support and maintenance of private charitable institutions. The number of hospitals and dispensaries in New York city was already something marvelous, while if the so-called excise fund (obtained from the sale of licenses for the privilege of selling spirits and malt liquor) were taken at all for charitable uses, it ought to be expended upon the *public* city charities, and not upon the *private* ones, which should by no means be supported at the public expense. In 1878 taxes were levied, among other things, for

Charities and corrections	\$1,160,000
Asylums, reformatories, and charitable institutions	948,840
Total	\$2,108,840

Reckoning for corrections, at most, \$1,160,000, a balance would be left of \$948,840 for charities. In addition, for the same year, \$111,571 was paid by the controller of the city of New York for dispensaries, asylums, etc.; and this was claimed to be absolutely wrong and unjust to the taxpayers and contrary to the public good.

In remedying the abuses one important step would be gained if the various county medical societies should protest against the granting of charters to hospitals and dispensaries where they were deemed unnecessary. The next point would be that the dispensaries and public medical charities should, unless good reason to the contrary exist, rigidly exclude from the benefits of such institutions all cases in which, upon examination, the patient was found able to pay the minimum fee of a physician; say one dollar, while charging those who were unable to pay this a small sum for medicines, though excepting the absolutely destitute. This was already being done in some of the dispensaries, and it was hoped that the plan would shortly be pursued in all of them. The third step would be a modification of the medical staff of the dispensaries. Instead of making the service, as now, on alternate days, it should be changed to a continuous one, and the attending physicians should be paid for their services. If it were urged that this was putting the charitable aspect of the case entirely out of the question, Dr. Sturgis claimed that the latter was just what was de-

sired, since a very large percentage of medical charity was undoubtedly a delusion and a snare, and the sooner it was swept away the better chance would there be for the correct understanding of the subject. There was no good reason why the doctors should be the only unpaid employees of a dispensary or hospital, since their time and skill were as valuable as any in the community, and their education, which for a long period was unremunerative, had cost them money as well as time.

All this supposed the management of the dispensaries still in the hands of a non-professional board. One other plan was proposed, and that was that medical men should have the full control of the dispensaries in which they worked, and in the following manner: Let any given number of physicians start a dispensary for themselves, — not a free dispensary, but a paying one, one that will be self-supporting, under a board of their own attending staff, asking no one for money for its support, but making those resorting to it pay (when able) for the services rendered. This would, it was believed, pay expenses, and in a short time after its inception allow of a surplus to be divided among the doctors, and thus remunerating them to a certain extent for their time.

In consequence of lack of time for the discussion of Dr. Sturgis's paper on this occasion, it was resolved that a special meeting of the society should be appointed for this purpose. At this special meeting, which was held April 14th, Dr. Sturgis, in opening the discussion, remarked that, while some of the profession were utterly indifferent to the matter, he believed that a sufficient number of them were alive to its importance to be able to accomplish a good deal in the way of reform, although this would undoubtedly take time. It was in the power of physicians to refuse their services in all cases where they did not believe the patients deserving of free treatment. The impression was more or less prevalent in the community that the dispensary doctors were regularly paid by the city, and hence that anybody had a right to apply to them for gratuitous treatment. Much might be accomplished at once if the medical boards would enter into a more free communication with the boards of trustees; and he believed that the time would come when all the dispensaries would be under one common management, — an arrangement desirable from a charitable point of view as well as in accordance with the principles of political economy. If these bodies were once united under one organization it would be much better for the profession financially, because a large number of patients who now receive medical attendance gratuitously, or for a merely nominal sum, would then be obliged to consult private physicians.

Dr. R. J. O'Sullivan said that in the autumn of 1877 a special committee had been appointed by the society for the purpose of investigating and reporting upon the subject, and that after holding a number of consultations they had made their final report about a year ago. This was referred to the *comitia minora*, which, after deliberating upon it for several months, returned it to the society with the recommendation that it should be referred to the state society, after which the matter had apparently been allowed to drop. He was therefore glad to see this renewed interest in the subject on the part of the members. The abuses mentioned were due, he thought, in part at least, to the very large numbers of young men graduated every year from the medical colleges, and the general scramble for positions in which they all at once engaged

whether qualified for them or not. Very little discrimination was made in conferring appointments, and he thought the older and more prominent members of the profession were very culpable for so readily assenting to write the most flattering recommendations of the various applicants. He had had an experience of fifteen years in one of the largest dispensaries in the city, and he believed that the great majority of dispensary trustees always treated the gentlemen of the medical staff with consideration. At the same time they knew very little indeed of the latter, as a rule, and for one he believed that the power of appointing to such positions should not belong to the trustees at all. This great matter of abuses of medical charities (to which, alas, so many of the profession were totally indifferent), he thought, could not be disposed of by medical societies, but was to be reached mainly through public opinion. It devolved upon medical men, however, by their united action to influence public opinion on the subject, and he believed that when a number of the most influential citizens had thus had their interest awakened in the subject the desired reforms could be carried through.

Dr. H. D. Noyes remarked that Dr. Sturgis's paper discussed mainly two points, namely, (1) the relation of the board of trustees of the dispensary to its medical staff, and (2) what means might be adopted for preventing unworthy patients from receiving treatment. In regard to the first he would say that, after a very considerable experience in dispensary work, he had been led to entertain a great respect for the members of boards of trustees, and he believed any reasonable proposition coming from the medical men would always be treated with due consideration by them. In the Eye and Ear Infirmary, with which he had long been connected, the trustees had adopted the plan of making one of the attending physicians a member of their board, and of entrusting to him, under their supervision, the entire management of the medical affairs of the institution. Hence every request coming from the medical staff met with a most respectful reception.

As to the second point, he had no doubt that a considerable number of applicants at the dispensaries were perfectly able to pay something, and agreed with what had been previously said, that much abuse of these institutions was principally due to a mistaken public opinion, and to indifference on the part of medical men themselves. Still, many of the attending physicians at the dispensaries had for years been endeavoring to eliminate unworthy patients from their classes. This work, he thought, should be further extended from motives of justice to the public, to the charitable purposes of the dispensaries and other organizations established for the relief of the sick poor, and to the medical profession. Again, the profession was responsible for these abuses in a sense which had not as yet been alluded to. Thus, a great many physicians, when they had troublesome cases on hand which were not likely to prove very remunerative, or such as they desired for any other reason to get rid of, were in the habit of sending the patients to the dispensaries, although knowing perfectly well that they had not the slightest right to apply to these institutions. Dr. Noyes related a very flagrant instance of this, which he said was only one case out of many that he might mention. It was a very wide-spread abuse, which extended to the country practitioners within a radius of many miles of

New York, as well as city physicians; and it showed a great want of consideration on the part of many medical men. He did not know of any way of getting rid of the abuse of medical charities by the public, except the establishment of what looks like a board of detection in connection with all dispensaries and similar institutions. The real difficulty lay in how to discover the facts in each instance, as it had been proved over and over again that the accounts which patients gave of their own circumstances were by no means always to be trusted. One other thing he thought would obviate the difficulty to a great extent, and that was that physicians in private practice should not be ashamed of accepting small fees in cases where the patients could not really afford more. It was better for the patient, as well as the physician, that he should pay even twenty-five cents than nothing at all.

Dr. M. H. Henry considered that this was the most important subject that had been brought before the county medical society for a number of years. These abuses of medical charities cried unto heaven, he said, and yet there seemed a strange hesitancy on the part of the profession to attack this great ulcer, which was really eating away the support of most of the younger men in it. But their continuance or suppression involved the question not only as to whether or not these young practitioners were to make a living by their profession, but also as to whether there was in the future to be any advance in medical science here; since the vast amount of work towards this end, as was well known, was accomplished by the young men, on account of the greater amount of time at their disposal and their more fervent zeal. At the present day, when there were such a vast number of hospitals, college clinics, and dispensaries (all more or less in direct competition with him), there was very little chance indeed for a young practitioner to make a decent living in New York. The large and thoroughly organized dispensaries situated in the several districts into which the city had been divided, he believed, were fully capable of caring for the wants of the absolutely destitute, and he thought that all others, (with the exception of one or two special institutions, like the Eye and Ear Infirmary and the Ophthalmic Hospital) should be discountenanced and discontinued, if possible. Contributing to them was simply a foolish waste of money, as well as a positive injury to the medical men of this city. The greatest outrage that had ever been perpetrated against the profession here was the opening of the out-door department of the New York Hospital, when its authorities advertised throughout the length and breadth of the country that the best medical advice of the metropolis could be obtained (by anybody, rich or poor) for the magnificent sum of one dollar per month. There was not the slightest occasion for having a dispensary within a few feet of Fifth Avenue, and surrounded by handsome club-houses and the homes of the wealthy; and yet the medical staff of the institution meekly submitted to the arrangement because, forsooth, they were afraid of incurring the displeasure of the governors. So, in other institutions, the physicians were afraid of losing influence with the board of trustees. It was high time, therefore, that the profession was awaking from its lethargy and taking a bold stand. Let it insist, said he, that its members should have a fair representation on all such governing boards, and let it put its foot down on all irresponsible institutions.

Dr. C. R. Agnew thought that a very earnest and thorough effort should be made to do away with this abuse, which he believed had sprung in a great measure from two causes. The first was the immense burden of pauperism now existing in all our large cities. There was a time when it was thought that there was no such thing as indigenous American pauperism, while such as we had was derived entirely from foreign countries; this was certainly no longer the case. The second cause referred to was the increased interest in the study of medicine within the last twenty-five years, in consequence of which a much larger number of young men had gone into the profession. The question as to whether a young physician could earn a livelihood from his practice depended to a great extent on the general principles of political economy, or, in other words, upon the state of the market to which he brought his wares. Hence it was our duty to cleanse that market, and give the laborer in it the best opportunity to dispose of his services. To this end it was desirable that the boards of trustees of all charitable medical institutions should govern them in a systematic, wise, and scientific manner; and one of the first principles to adopt in so doing was never to give treatment to any individual who could afford to pay for advice elsewhere. Therefore, at the door of every such institution there should be a lynx-eyed but courteous verger, who should investigate the circumstances of every applicant. As a society, of course, we could not coerce these boards, but we could at least explain to them clearly the principles on which their institutions should be managed.

Dr. Erskine S. Bates, who was one of the committee formerly appointed by the society to investigate the subject of abuses of medical charities, read some interesting statistics to show of how much money value were the services which the physicians of New York annually rendered to these institutions, and contended that the medical staff should always receive salaries, as well as the other individuals employed in them.

After remarks by Dr. H. G. Piffard and another member, who advocated united action on the part of all the dispensaries, and the appointment of visitors for the different districts of the city (as in the case of the Association for Befriending the Poor), through whom every application to these institutions should come, the further discussion of the subject was postponed to another special meeting of the society, to be held on Monday, April 1st.

(To be concluded.)

RECENT SURGICAL WORKS.

THERE are certain general characteristics belonging to all surgical text-books which seem to have been inherited from the literature of a previous generation, and which, in spite of the radical changes in the methods of the study and practice of surgery, are still adhered to even by the very latest aspirants for literary honors. The many admirable treatises on special subjects which have made their appearance of late years have relieved the text-book writers from a serious and, we should think, irksome responsibility. It is a matter, therefore, of surprise that we still find in these works an attempt to cover the

whole of a certain conventional area dedicated in old times to surgery; that it is thought necessary to devote a certain portion of a very crowded book to several diseases, to the eye or ear, by every one who undertakes to write about the various forms of injury to which the human body is liable. It is a conviction daily growing stronger that could all the subjects which are now taught in special treatises, such as tumors, operative surgery, and those already mentioned, be discarded from the text-book, the remaining portion would be handled in a far more satisfactory manner than has hitherto been attempted.

It is perhaps in the recognition of some such principle that Dr. Agnew has modeled his treatise on the Principles and Practice of Surgery,¹ the first volume of which has recently appeared. This embraces, beside injuries of the various portions of the body, diseases of the bones and arteries, chapters on surgical diagnosis, inflammation, wounds, and surgical dressing; also one chapter on the "ligation" of arteries. All this is strictly surgical, and no chapter, except perhaps the latter, could with propriety be omitted. It remains to be seen whether the departments to which we object have not been reserved for the second volume.

The chapters on inflammation and wounds are comprehensive, and show an extensive knowledge of surgical literature. The subject of repair is well handled, and there are many new and instructive illustrations, but there is a very meagre account of the various forms of surgical fever, which are only incidentally alluded to. We notice among the methods of treating inflammation that the author retains the views of old-fashioned surgery in regard to the efficacy of mercury and tartar emetic, while the description of the antiseptic method is exceedingly brief, and the chapter on surgical dressings contains little that is not to be found in books written over a quarter of a century ago. This is hardly giving due prominence to what may be called the modern art of treating wounds.

The most striking feature of the book is that part appropriated to fractures, nearly one hundred pages being given to statistical tables on the treatment of fractures, the greater part being devoted to cases of pseudarthrosis, of which there is a collection of nearly seven hundred. Turning to other portions of the work, we find one hundred pages given to aneurism, a very clear and systematic treatise on hernia and on the various forms of intestinal obstruction. It is in these portions of the work that the writer has shown an unusual amount of industry and ability as a surgical teacher. Too much praise can hardly be awarded to the author for his enterprise, we might almost say boldness, in entering upon a field in which so many laurels have already been won by colleagues, and in which he has fully sustained the reputation of his native city. We shall look with great interest for the second volume of this book, which will doubtless assume at once the position of a standard work of reference for American surgeons.

That the University of Pennsylvania is bound to sustain its old reputation

¹ *The Principles and Practice of Surgery.* Being a Treatise on Surgical Diseases and Injuries. By D. HAYES AGNEW, M. D., LL. D., Professor of Surgery in the Medical Department of the University of Pennsylvania. In two volumes. Vol. I. Philadelphia: J. B. Lippincott & Co. 1878.

and gives no signs of decaying vigor in its faculty, is shown by the fact that another of its members has already brought out a second edition of a valuable work in this department of medicine. Dr. Ashurst's *Surgery*¹ is as compact and comprehensive a treatise as any to be found in the English language. It is emphatically a text-book, and one particularly well adapted for the use of students. The author's well-known familiarity with the whole domain of surgical literature gives his writings a peculiar value. Evidences of this are seen on almost every page. We find mention of many of the rarer forms of surgical disease, with due appreciation of their true character, such as, for instance, perforating ulcer of the foot. The latest contributions to practical surgery are embodied in this edition, and due attention is always paid to original investigations of others. The nature and treatment of shock are more clearly described than in most works of the kind, and the author's views of inflammation and its treatment are succinctly and plainly stated. The illustrations are unusually good, and in the chapter on amputation we find a valuable feature, the delineation of the results of the various methods. The chapter on tumors is of course very brief, and modern pathologists might be disposed to criticise many points, such as the recognition of an osteoid cancer and the classification of the epitheliomata in a separate group from the carcinomata, but it is fair to say that the subject is treated better than in most surgical text-books. We can safely recommend Dr. Ashurst's work as one of the best books that we know of to place in the hands of the beginner, to say nothing of many features which make it valuable to the oldest students of the art for reference.

The rapid strides made by science are nowhere more clearly marked than in the chameleon-like changes of a popular work as each new edition makes its appearance. The announcement that a new edition of Dr. Hackley's translation of Billroth's *Surgical Pathology*² is a matter of genuine interest to all surgeons who have a "scientific" bias, as well as those who have a taste for well-written books. The chief additions are to be found in an appendix, an inconvenient form for the general reader, but an arrangement rendering it easy to determine their character. Due prominence is of course given in this edition to the Lister dressing, and the rôle played by the omnipresent bacterium is discussed as might have been expected by the learned author of a ponderous monograph upon that subject. The easy, polished style of these lectures, the off-hand way in which the most complicated processes are explained so as to be easily comprehended by the dullest reader, and the wonderful power of narration possessed by the author place this work, in our estimation, in the very highest rank of surgical literature. The translation has, apart from a few "Americanisms," succeeded in rendering the style of the author with great fidelity, and this is so attractive that one is led unwittingly over ground that under less skillful guidance many would doubtless "fear to tread."

¹ *The Principles and Practice of Surgery*. By JOHN ASHURST, JR., M. D., Professor of Clinical Surgery in the University of Pennsylvania. Second edition, enlarged and thoroughly revised. Philadelphia: Henry C. Lea. 1878.

² *General Surgical Pathology and Therapeutics in Fifty-One Lectures*. A Text-Book for Students and Physicians. By DR. THEODORE BILLROTH. Translated and revised from the eighth edition by CHARLES E. HACKLEY, M. A., M. D. New York: D. Appleton & Co. 1879.

THE MEETINGS AT ATLANTA.

THE annual meeting of the American Medical Association, which will be held next week at Atlanta, Georgia, promises to be one of more than usual interest. The opportunity thus given to the Northern members to meet their colleagues on Southern ground will help to reunite many friendships and revive many associations blotted out by the civil war, and will also enable the association to exercise what we believe to be one of its most useful functions, to bring men together from the most distant quarters of the land to profit by one another's experience. A meeting held under such auspices cannot fail to generate a most cordial feeling of good-will among an influential class in the community, and it would be well for the country could other professional or commercial bodies have equal opportunities to fraternize. The charms of a Southern city at this season of the year will also contribute to the popularity of the meeting. But there are other "side-shows," which of late years have begun to spring up around the great central attraction, and these appear this year to have become unusually prominent. Most conspicuous among these is a mass-meeting, to be held to-morrow, that is, several days before the opening of the association session, in the interests of medical education, — perhaps we might more appropriately say, in the interests of the medical colleges. This is not the American Medical College Association, but a more catholic body, composed of sheep of all colors, both members of the association and those who could not or would not join it. The chief question to be determined is whether any uniform system, which shall be a decided advance beyond the old standard, is possible at the present time. Whether the deliberation of bodies of this character may or may not produce something useful to the cause of medical education we will not pretend to affirm or deny. The present movement, however, has a flavor of mutual insurance about it, taking into consideration the welfare of the present college faculties rather than the future members of our profession, in whose behalf it is ostensibly made. We cannot believe that the problem of medical education will be worked out in any other way than by the individual efforts of the separate schools. The brave and enterprising will strike out for themselves; the timid will huddle together in the rear.

We announce elsewhere a meeting of the Association of American Medical Editors, which takes place on Monday next. We hope some action will be taken by this body towards remedying the present deplorable condition of our periodical literature. It is unworthy of the profession which it pretends to represent, and is a serious obstacle in the way of our obtaining that standing in the professional world which we deserve. One would suppose this would be the most legitimate object of such an association, but we have never heard of any such investigations emanating from its meetings.

The Transactions of the National Association have but just appeared. They are certainly very creditable to that body, and contain a large number of practical and scientific articles. We think, however, the members have a right to demand that their labors should not be obliged to undergo a whole year of incubation before shedding their light upon the scientific world. If such a custom is adhered to, it will be fatal to future progress, for few men of

reputation will submit to such delay. The presiding officer of the present meeting is Dr. Theophilus Parvin, of Indiana, a gentleman widely known and respected, who will fill the office to the satisfaction of both Northern and Southern members. We shall present a report of the meeting to our readers in our next issue. We take this opportunity to express our most cordial wishes for its success.

MEDICAL NOTES.

— On the first Monday in May Mr. G. F. Babbitt becomes a member of the Boston Board of Health, in place of the Hon. A. W. Boardman. The latter gentleman has held a position on the board ever since it was first formed, being appointed in 1875 by Mayor Pierce, and subsequently reappointed by Mayor Cobb. He has faithfully discharged the duties of the office, and his legal knowledge has often been of great service to the board. He resumes the practice of his profession, in which the experience gained by him while in the service of the city must be of great value.

— At a recent agricultural meeting in Darmstadt it was stated that since the adulteration of milk had been so vigorously and severely punished by the police the mortality of infants had decreased about fifty per cent.

— Professor Peter, in *La France médicale*, describes a phenomenal pulse which he discovered in patients who were in the last stages of phthisis. It is a venous pulse, occurring on the back of the hand, and can be seen as well as felt. It becomes more distinct when the hand is compressed so as to arrest the venous circulation; compression of the arm exaggerates instead of suppressing it. Peter therefore concludes that the pulsating blood comes from the left and not the right heart. He considers it due to a paralysis of the muscular fibres of the arteries from the half-asphyxiated condition of the patient. This condition permits such a free flow of blood through the capillaries that the arterial pulsation is transmitted to the veins. During the last moments of life, when the pulsations become feebler, this venous pulse disappears. Peter confesses that the phenomenon is rare, but deems it of great importance from the fact that it heralds the coming of death.

— When Simpson introduced chloroform its use was opposed on religious grounds, people contending that according to Scripture man should endure pain and trouble throughout life. Sir James Simpson cunningly met the argument by saying that before the performance of the first operation known to history, namely, the removal of a rib from a man's side, the man was put into a deep sleep, and knew nothing of the operation.

— As our readers are aware, a bill is now pending in the New York state legislature to have the coroner system abolished. The advantages of this reform are illustrated in Richmond County, where it is stated that not more than one in a hundred of the inquests held is necessary. The county had one of the first boards of health in the country, but prejudice and politics combined to abolish it. The chief objection raised was its expense, but it has been shown that bills of one coroner alone for one year often exceed the total cost of the board to the county.

— According to the *Maryland Medical Journal*, a bill has been introduced in the legislature of Texas to compel *every physician* in the State, without regard to age or length of practice, to appear every three years before an examining board; and unless he prove to the satisfaction of the board that he is making satisfactory progress in the study of medical science it will be considered as evidence that he is not a fit person to have charge of the public health, and his license to practice will be rescinded. It is probable this bill will pass. Such a bill would cause a rattling of dry bones in any State of the Union.

NEW YORK.

— It has been a very long time since as many as three cases of small-pox have been known to occur in New York in one week, as has just happened. A few days ago a child was reported to be dead in a tenement house in the eastern part of the city, and when a health inspector went to investigate the case he found a well-marked variolous eruption covering the body. Of course every effort was promptly made to disinfect the premises and vaccinate the inmates, but a number of them, being ignorant Bohemians (to which nationality the dead child belonged), refused to have the vaccination performed. Three days afterward two other children in the same house were taken down with small-pox, and when Dr. Janes, of the health department, and his assistants came to visit them preparatory to removing them to the Riverside Hospital, on Blackwell's Island, the parents and the rest of the family, learning their intention, became desperate, and endeavored to escape with the children, so that it was necessary to guard the trap-door on the roof and all the other doors of the house until the arrival of the ambulance. The tenement house has again been thoroughly disinfected, and a still more strict watch will now be maintained in the neighborhood. As yet no further sickness has been discovered, and no apprehensions of an epidemic are entertained. The origin of the first case still remains a mystery.

— It is pleasant to record the conviction and sentence of another of those pests of society, the professional abortionists, since it is so seldom that they can actually be brought to justice. A certain "Madame Berger," accused of causing the death of a young woman from Long Island by malpractice, has been found guilty; and although the jury, in bringing in their verdict against the woman, recommended her to mercy on account of her advanced age, the judge very properly gave her a sentence of twelve years.

WASHINGTON.

— By order of the executive committee, the National Board of Health will convene in special session at Atlanta, Georgia, on the 5th of May, and continue in session contemporaneously with the American Medical Association, which meets in regular session at the same place on the 6th of May. The importance of an early interchange of views and the absolute necessity for consultation with health officers, quarantine physicians, and sanitarians generally throughout the United States has led the National Board of Health to make known its contemplated meeting at Atlanta, and urge upon all persons interested in matters of sanitation, whether municipal, state, or national, to be present and counsel with the board. It is earnestly hoped that not only every

State, but that every municipality in the whole country, will be represented, in order that a step may be taken towards securing a general system of health and quarantine regulations, and that by such a gathering of the prominent sanitarians of the United States the interests of all sections may be promoted.

CHICAGO.

— Dr. E. L. Holmes has recently reported to the West Chicago Medical Society a curious case of *objective sounds in the ears*. The patient is a girl of seventeen, and the trouble has continued since childhood, — during all her waking hours. The sounds accompany spasmodic contractions of the pharyngeal muscles. About forty of these occur with regularity every minute. They resemble slight efforts at swallowing. With each spasm there is heard within the ear a clicking sound, being loudest in the left. The sound resembles the rubbing of the nails of a thumb and finger. From the left ear it can be heard eighteen inches away : from the open mouth it can be perceived, but it seems more distant. The lips of the Eustachian tubes open slightly with each spasm. The membranæ tympani were thick and opaque at the upper border. It is Dr. Holmes's opinion that the sounds are due to spasms of the tensor tympani muscles. The girl is anæmic, but the local trouble has not been helped by tonics.

ST. LOUIS.

— At the meeting of the St. Louis Medical Society on April 12th, a committee was appointed to present to the mayor and city council a request that the health commissionership, which becomes vacant in a few days, should be filled by a physician. The present incumbent, Mr. Charles W. Francis, who is not a physician, will probably, however, be reappointed, as the mayor is in favor of his retaining his position, and as also there is quite a strong sentiment in his favor among the members of the profession. It must be said of him that he has made an efficient and satisfactory officer.

— The Missouri State Medical Association will convene at Columbia, in that State, May 21st. It is expected that it will be a very interesting occasion, and will be largely attended by the younger members of the profession.

— A bill has just passed the state legislature prohibiting druggists of less capital than five hundred dollars from selling liquors in any quantity, and those of larger capital except upon the written prescription of a physician or the authority of a dram-shop license. Physicians are prohibited from prescribing liquors, or anything containing liquors, for any other than medical purposes. This bill also requires all druggists to file, in the office of the clerk of the court having jurisdiction of criminal cases within the county in which their stores are situated, all the prescriptions which they have filled containing liquor, in order that they may be inspected by the grand jury.

— The St. Louis College of Pharmacy conferred the degree of "graduate in pharmacy" upon sixteen young men on the 18th ult.

— Health Commissioner Francis has been nominated by the mayor for reappointment, and will undoubtedly be confirmed by the council. His reappointment will be quite welcome to a large number of the profession here, as, although not a physician, he has made a very able officer, and he has the assistance of the health officer, Dr. George Homan.

LETTER FROM NEW ORLEANS.

The Board of Health. — Sanitary Regulations.

MR. EDITOR, — In my last letter the quarantine functions of our board of health were noticed; the present one will continue the subject with a description of the sanitary system in force in New Orleans. This system originated in 1866, previous to which time the board of health was vaguely supposed to have something to do with the sanitary condition of the city, but its mode of proceeding had never been defined.

The approach of cholera in 1866 was the occasion of the passage of a set of sanitary ordinances, by the concurrent action of the board of health and the city authorities, with the execution of which the former body was charged. For this purpose the board was authorized to select four health officers (one for each municipal district), to be paid by the city and aided by a detail from the police force. After a few months the salaries of the health officers were stopped, and the board had to suspend its sanitary work. The city authorities continued to use their discretion in maintaining a sanitary system, at one time making allowance for its support, and at another withholding it, until 1870, when the legislature empowered the board of health to select six sanitary inspectors (four for the municipal districts and two for the suburbs), and call for a detail from the police, and the city was required to provide for the expense. The board was also authorized to enact sanitary ordinances without the concurrence of the city government, but generally this concurrence has been asked and granted.

Since 1870 most of the suburbs of New Orleans have been annexed to the city, so that there are now seven districts, with as many sanitary inspectors. and fifteen sanitary officers, who are commissioned as policemen. All are under the orders of the board of health, but their salaries are paid by the city. The inspectors have always been physicians, with a single exception, which was made in 1873, in favor of a colored lawyer, at the request of the governor.

The peculiar feature of our internal sanitary system is the house-to-house inspection by the sanitary police. This inspection is commenced in January, and it is designed to go over the most densely populated portions of all the districts before the approach of hot weather. As a matter of fact, however, this has never yet been accomplished, on account of interruptions through the intervention of small-pox, bad weather, or some other causes. The inspection is now made by squares, and every house and lot are visited. The sanitary officer is supplied with blanks, on which he records numerous particulars, as follows: the water supply, whether by hydrant, cistern, or both, or without any supply; houses used as dwellings, and as stores, factories, etc.; houses built of wood or brick; houses vacant; number of rooms in houses; number of persons occupying premises, classified as white and colored; children born during previous year, white and colored; condition of floor, whether good or bad; condition of roof; condition of privy; vacant lots.

Reports are rendered monthly by the sanitary inspectors to the board of health, including a summary of all the above particulars, and also the following: number of inspections made; number of reinspections (to see that orders have

been complied with) : nuisances found requiring abatement ; nuisances abated ; orders issued to empty privy vaults ; also orders to rebuild, to repair, and to disinfect vaults, to clean premises, to repair houses, to fill lots (so as to drain the same into the street gutters), to supply water, to remove hogs, number of premises disinfected and fumigated ; cases of small-pox and yellow fever ; vaccinations of people, white and colored ; certificates of vaccination to children, white and colored (required for admission to the public schools).

The plan supposes all premises to be visited at least once a year, and places of public resort oftener. Some inspectors have made lists of places to be visited frequently, at irregular intervals, being governed by experience of their particular needs and conditions. Orders to abate nuisances are signed by the district inspector, and give a specified time for compliance. The penalty for non-compliance is a fine accruing to the board of health. Unsuccessful efforts have been made for several years to procure authority from the legislature to impose a penalty of imprisonment, at the discretion of the court ; for it is found that the rich indefinitely prolong civil suits by appeal to a higher court, while, on the other hand, the penalty of a fine falls harmless upon the great majority of our sovereigns, who are independently poor.

It is the privilege of all individuals to make complaint of nuisances and of violation of sanitary ordinances, either at the office of the board or at that of the district inspector. The case is then investigated, and if a nuisance exists within the power of the board to abate, an order is issued. Whenever a nuisance on the streets or in public buildings and grounds grows out of the neglect of city officials or employees, information is sent to the city hall ; and this is generally found sufficient, unless it is an abuse of long standing. Frequently complaints grow out of the quarrels of neighbors, one or both of whom try to enlist the sanitary authorities to punish the adverse party ; but, as a rule, people are reluctant to lodge complaints, particularly against their neighbors. For several years these domiciliary visits were disliked by a large proportion of our population, especially among the creole element below Canal Street, but the objection has mostly died out, and the sanitary police are now received in a very friendly manner.

As a preventive of small-pox, it is made the duty of the sanitary inspectors to vaccinate gratuitously all who apply for this service, and also to offer it to all people living near a case of this disease. Unfortunately the city is not provided with a suitable small-pox hospital, for want of which that class of patients are taken on contract by the proprietor of a private hospital. In consequence of this faulty arrangement, very few are sent to this hospital against their own consent. Among our colored population there is a very prevalent opposition to vaccination. Some of them say that it is useless, seeing that so many take small-pox after vaccination ; others declare that they can't escape the disease if it is God's will for them to have it. In the absence of any authority for compulsory vaccination, we are therefore in danger of an epidemic of this loathsome disease every winter ; but, thanks to our long summers, it usually disappears in July or August.

Two years ago the president of the board of health was constituted by law *ex officio* recorder of vital statistics for the city of New Orleans, and the fees have since accrued to the funds of the board. This office had previously been

in the gift of the governor, and was of course made a reward for partisan services. The registration of births, deaths, and marriages has been compulsory, under penalty of fifty dollars' fine, but in reality only the deaths were recorded with any approximation to completeness, and this resulted from the fact that no corpse could be buried without a certificate from the attending physician. Thus a death was rendered so public a matter that registration could not easily be avoided. The party responsible for the registration has to pay the fee, which is fifty cents for a birth or death, and one dollar for a marriage.

Under the former regulation no report was required or made, and the records were used only for reference by parties interested in legal cases. Under the present arrangement the board of health realizes about three thousand dollars for its support, at an expense of about twenty-five hundred dollars. By means of the annual house-to-house inspection the births of the previous year are ascertained, and if any are not recorded the parties responsible are notified. Thus the registration for births has attained something like completeness, and in consequence the board has been able to present tables of our births and deaths which will compare favorably with any others in the country. By providing that marriage licenses should be issued only by authority of the board of health, the registration of marriages also could be made complete, and thus could be secured an important element of the vital movement. The board already has this privilege in common with several officials, but has so far been unable to gain the exclusive power.

At the last two sessions of our legislature earnest efforts were made to obtain the passage of an act creating local boards of health in all the parishes (counties) of the State, subordinate to the state board, and to extend the registration of vital statistics throughout the State, under the administration of these local boards of health. The scheme looked very respectable on paper, and sounded remarkably well before an intelligent audience; but the country members evidently thought it a cunning device of the adversary to entrap the souls of the unwary, or of the doctors to entrap their bodies, so they prudently decided that it was a very good thing to let alone. As a friend and advocate of the measure, I have gained some experience to reward my labor, and begin to suspect that, by some unaccountable mistake, I was born a generation or two ahead of my proper time.

Two years ago the inspection of coal oils was devolved upon the board of health; that is to say, the board select and pay the inspectors for the city of New Orleans, and receive the fees. No inspection of illuminating oils was made here previously, and consequently our market was the favorite destination of the vilest and most dangerous oils known to the trade. War and pestilence had done their worst, in vain, for our destruction; we had been reserved for the wrath to come in the shape of oils bearing euphonious and destructive titles, and warranted as "non-explosive."

The present law requires illuminating oils derived from petroleum to be gauged and inspected if designed for use within the limits of the State. If the "flashing point" is found to be below 125° F., the package is marked "explosive and dangerous," and can then be sold and used like any other. It was presumed that this would be sufficient warning to the purchaser and consumer, but in reality the consumer rarely sees the mark. Besides, there is no

penalty for altering or erasing the inspection marks, for changing the contents of the packages after marking, or filling them repeatedly without erasing the marks. Notwithstanding these and other defects, it has twice been found impracticable to obtain passage for an amended bill through our legislature. Yet the inspection, with all its defects, has done some good. It has been much talked about, and prudent people prefer to use oils not branded "explosive and dangerous."

Repeated efforts have been made to place the inspection of live animals and flesh intended for human consumption under the administration of the board of health. The governor, even, recommended this measure in his last annual message; but the majority of our legislators hold that the governor's patronage must not be impaired, and so the inspector is still chosen for political services rather than for any qualifications for his duties.

Although the powers of our board of health are too much restricted to answer the sanitary needs of such a city as New Orleans, yet, on comparing its present efficiency with its former impotence, we see so much progress in ten years as to entertain hope for the decade to come. In the execution of its sanitary functions it finds far less opposition than in the enforcement of quarantine, and last year the faith of the people in its ability to stamp out yellow fever by the use of disinfecting agents was so implicit and prolonged that reaction from disappointment produced a nearer approach to panic than was ever before known in presence of pestilence.

S. S. II.

March 15, 1879.

SHORT COMMUNICATIONS.

MEDICAL WITNESS FEES.

MR. EDITOR, — Can there not be something done to raise the fee at present paid physicians for testifying at inquests? One day last week I lost my dinner and two hours of precious time in order to tell what I knew about a man dead from a railroad accident. In return I received just ninety cents. I have been informed that the judge can *officially* allow a larger fee. Till some action is taken I hope my medical brethren will insist on his honor's allowing them liberal pay. These remarks apply to the municipal courts also.

I am very respectfully your obedient servant, G. W. COPELAND, M. D.

MAVERICK SQUARE, EAST BOSTON, April 25, 1879.

TYPHOID FEVER IN ADVANCED AGE.

In an interesting discussion on this subject, reported in the *JOURNAL* April 22, 1869, which came up in connection with a case described by Dr. Cotting, and in which Drs. Jackson, Hodges, and others took part, the fact of the absence of Peyer's patches in old persons, as stated by British authors, was questioned. In four cases of autopsies in subjects over seventy years of age, who did not die of typhoid fever, subsequently examined by Dr. Cotting, Peyer's patches were found to be well marked in two, absent in the other two. In Quain's *Anatomy*, page 848, it is stated that "after middle life they become more or less flaccid and empty, and have generally completely disappeared in advanced age." Drs. J. B. S. Jackson and John Homans verified the appearances in the four autopsies referred to above. What the relations may be between the ulceration of Peyer's glands and the elimination of the typhoidal poison is unknown, but in patients over forty the disease when it occurs is apt to be severe. The persistence of Peyer's patches, in certain individuals at least, to an advanced age might afford means for verifying this affection, and their occasional presence only would be a sufficient answer to those who regard their assumed non-existence as invalidating the diagnosis of typhoid fever in elderly persons.

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 19, 1879.

Cities.	Popula- tion estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from					
				The Prin- cipal "Zymot- ic" Diseases.	Pneumo- nia.	Scarlet Fe- ver.	Diphtheria and Croup.	Diarrhoeal Diseases.	
New York.....	1,085,000	512	24.61	20.12	11.33	10.74	3.13	1.9	
Philadelphia.....	—	—	—	—	—	—	—	—	
Brooklyn.....	564,400	214	19.77	21.03	10.75	5.61	7.01	3.27	
Chicago.....	—	136	—	16.91	7.35	2.94	11.03	0.74	
St. Louis.....	—	99	—	6.66	25.24	3.33	—	—	
Baltimore.....	365,000	133	19.00	15.78	7.52	3.76	6.02	0.75	
Boston.....	360,000	138	19.98	11.59	16.67	1.45	5.07	1.45	
Cincinnati.....	—	84	—	27.38	11.90	14.28	2.38	1.19	
District of Columbia.....	160,000	90	29.28	16.66	20.00	1.11	6.67	1.11	
Cleveland ¹	—	—	—	—	—	—	—	—	
Pittsburgh.....	—	50	—	16.00	6.00	—	6.00	2.00	
Milwaukee.....	—	26	—	11.54	7.69	—	11.54	—	
Providence.....	101,000	44	22.56	13.63	15.91	2.27	6.82	2.27	
New Haven ¹	60,000	—	—	—	—	—	—	—	
Charleston.....	57,000	24	21.95	16.66	4.17	—	—	8.33	
Nashville.....	27,000	11	21.22	9.09	—	—	—	9.09	
Lowell.....	53,300	22	21.52	13.64	4.55	—	4.55	—	
Worcester.....	52,500	15	14.90	20.00	6.67	—	—	6.67	
Cambridge.....	51,400	17	17.24	5.88	11.76	—	—	—	
Fall River ¹	48,500	—	—	—	—	—	—	—	
Lawrence.....	38,200	14	19.11	28.57	—	—	21.43	—	
Lynn.....	34,000	14	21.48	35.71	—	28.57	7.14	—	
Springfield.....	31,500	12	19.86	8.33	16.67	—	—	—	
New Bedford.....	27,000	18	34.76	22.22	16.67	—	5.55	—	
Salem.....	26,400	11	21.73	18.18	—	—	18.18	—	
Somerville.....	23,350	8	17.86	—	37.50	—	—	—	
Chelsea.....	20,800	5	12.54	—	60.00	—	—	—	
Taunton.....	20,200	6	15.49	—	16.67	—	—	—	
Holyoke.....	18,200	13	37.25	38.46	15.38	23.08	—	7.69	
Gloucester.....	17,100	9	27.44	—	—	—	—	—	
Newton ¹	17,100	—	—	—	—	—	—	—	
Haverhill.....	15,300	6	14.45	16.67	—	—	16.67	—	
Newburyport.....	13,500	9	34.76	—	11.11	—	—	—	
Fitchburg.....	12,500	2	8.34	—	—	—	—	—	

¹ Not reported.

One thousand seven hundred and forty-two deaths were reported: 304 from the principal "zymotic" diseases, 277 from consumption, 215 from pneumonia, 102 from scarlet fever, 87 from diphtheria and croup, 69 from bronchitis, 30 from diarrhoeal diseases, 27 from whooping-cough, 18 from erysipelas, 16 from typhoid fever, eight from measles, six from cerebro-spinal meningitis, one from small-pox (in New York). Allowing for cities not reported, an increased fatality is noted in typhoid fever, diarrhoeal diseases, pneumonia, and scarlet fever; decreased in cerebro-spinal meningitis, measles, whooping-cough, erysipelas, diphtheria and croup, and consumption, the other diseases remaining about the same. From *bronchitis* 28 deaths were reported in New York, 15 in Brooklyn, five in Boston, four in Baltimore and Pittsburgh, three in Cincinnati and District of Columbia, two in St. Louis and Milwaukee, one in Chicago, Springfield, and Salem. From *whooping-cough* nine in New York, seven in Brooklyn, four in Cincinnati, two in Boston, one in Baltimore, District of Columbia, Pittsburgh, Cambridge, and Springfield. From *erysipelas*, four in New York and Brooklyn, two in Lowell and Worcester, one in Baltimore, Boston, Cincinnati, District of Columbia, Lawrence, and New Bedford. *Typhoid fever*, two in Boston, Cincinnati, District of Columbia, Charleston, and New Bedford, one in New York, St. Louis, Baltimore, Pittsburgh, Providence, and Holyoke. From *measles*, four in New York, two in Pittsburgh (still quite prevalent on the "south side"), one in Baltimore and District of Columbia. From *cerebro-spinal meningitis*, two in New York and Chicago, one in Baltimore and Cincinnati. Three cases of *trismus nascentium* were reported in Charleston, one in Baltimore, District of Columbia, and New Haven; of *congestive fever*, two in St. Louis, one in Chicago; of *remittent fever*, two in Baltimore; of *malaria* and *typho-malarial fevers*, two in District of Columbia; of *bilious fever*, one in New Haven. The death-rate for whites in District of Columbia was 21.59, for colored 44.30. In seventeen of the nineteen cities of Massachusetts, with an estimated population of 815,250, the death-rate was 20.29, showing an increase of 2.39 from

the previous week, attributable largely to pulmonary diseases, there being no marked change in the others.

During the first part of the week the weather was changeable, with a cold storm, and snow in the Eastern and Northern States on Friday and Saturday; the meteorological record for Boston (latitude $42^{\circ} 21'$; longitude $71^{\circ} 4'$) being as follows:—

Date.	Barom- eter.	Thermom- eter.		Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.		
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7 A. M.	9 P. M.	7 A. M.	Daily Mean.	7 A. M.	9 P. M.	7 A. M.	9 P. M.	7 A. M.	9 P. M.	7 A. M.	9 P. M.	Duration.	Amount in Inches.	
April 13	29.909	46	51	30	61	20	37	39	W	SW	SW	14	15	12	C	F	O	—	—
" 14	29.753	47	49	30	82	39	49	51	SW	NW	SW	6	10	8	O	C	R	—	—
" 15	29.772	49	45	36	59	58	30	60	E	E	E	5	12	10	C	O	R	—	—
" 16	29.874	44	35	36	100	36	68	69	NW	NW	E	7	11	12	G	F	C	—	.34
" 17	29.978	38	45	34	73	77	9	80	NE	E	NE	7	10	12	R	T	R	—	.24
" 18	29.483	37	39	33	80	50	69	82	NE	NE	NE	20	20	27	R	R	R	—	1.90
" 19	29.579	33	35	30	100	100	70	90	N	N	NW	22	17	6	S	R	F	—	.35
Week.	29.763	41	57	30				70		NE					2276 miles.			64.8	2.83

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; T., threatening.

For the week ending March 29th, in 149 German cities and towns, with an estimated population of 7,392,449, the death-rate was 28.0, an increase of 0.1 from the previous week. Of the infectious diseases, only measles had increased, being widely prevalent; scarlet fever and typhoid fever had diminished, the others remaining about the same. An epidemic of typhoid fever, due to polluted drinking-water, in Wielitzken has immediately declined upon closure of the wells. Diseases of the respiratory organs continued widely prevalent and fatal. Three thousand nine hundred and eighty-seven deaths were reported: 621 from consumption, 514 (an increase) from acute diseases of the respiratory organs, 162 from diarrhœal diseases, 154 from diphtheria and croup, 58 from measles, 54 from whooping-cough, 51 from typhoid fever, 50 from scarlet fever, 28 from puerperal fever, 10 from typhus fever, none from small-pox. The death-rates ranged from 18.7 in Carlsruhe to 41.6 in Strasburg: 32.5 in Dantzic, 27.7 in Breslau, 40.5 in Munich, 25.7 in Nuremberg, 27.6 in Dresden, 23.8 in Berlin, 25.0 in Leipsic, 25.4 in Hamburg, 25.0 in Bremen, 34.5 in Cologne, 20.9 in Frankfort-on-the-Main.

For the week ending April 5th, in the 20 English cities having an estimated population of 7,383,999, the death-rate was 27.2, a decrease of 1.0 from the previous week. The fatality from pulmonary diseases and whooping-cough continued excessive, decreasing, however, from the former; measles and diarrhœa were more fatal, scarlet fever decreasing, diphtheria more widely prevalent, and small-pox more fatal in London. Three thousand eight hundred and fifty-one deaths were reported: 628 from pulmonary diseases, 153 from whooping-cough, 90 from scarlet fever, 62 from measles, 52 from diarrhœa, 37 from fever, 20 from diphtheria, 17 from small-pox (in London). The deaths from small-pox in Dublin declined to nine from 17 of the previous week. The death-rates in 23 cities of the United Kingdom ranged from 13.5 in Norwich to 36.1 in Wolverhampton: Edinburgh 18, Glasgow 26, Dublin 32, London 28.2, Birmingham 31.0, Liverpool 26.5, Manchester 29.6, Portsmouth 19.8.

Fevers and small-pox remain prevalent in India; small-pox and typhoid fever in Paris; measles in Brussels; typhus and typhoid fevers in Geneva, Amsterdam, and Turin; small-pox, scarlet, typhus, and typhoid fevers, in St. Petersburg; small-pox and diphtheria in Vienna; small-pox and measles in Budapesth; diphtheria in Naples and Milan. The case of plague in Wetlianka has ended in recovery, and no others have been reported in the Volga district, where vigorous sanitary measures are still carried forward. Three suspicious cases have occurred in Kurtowka and Bender; the patients were isolated, their clothes were burned, and other precautions were taken. There is a general improvement in the sanitary condition and in the prevalence of fevers in the Turkish cities and towns. Quarantine is still enforced by the principal nations of Europe.

BOSTON MEDICAL ASSOCIATION.—The annual meeting will be held at the Medical Library No. 19 Boylston Place, on Monday, May 5th, at half past three in the afternoon.

CHARLES P. PUTNAM, *Secretary*.

ASSOCIATION OF AMERICAN MEDICAL EDITORS.—The annual meeting of this association will be held at Atlanta, Ga., on Monday evening, May 5, 1879. The annual address will be delivered by the president, William Brodie, M. D., of Detroit. All editors of medical journals and publications are entitled to membership in the association, and are cordially invited to be present and participate in the meeting.

65 E. RANDOLPH ST., CHICAGO, ILL.

F. H. DAVIS, M. D., *Secretary*.

SIXTH DECENNIAL PHARMACOPŒIA CONVENTION.—To the several incorporated state medical societies, the incorporated medical colleges, the incorporated colleges of physicians and surgeons, and the incorporated colleges of pharmacy throughout the United States:—

By virtue of authority devolved upon me as the last surviving officer of the Pharmacopœia Convention of 1870, I hereby call a general convention to meet in Washington, D. C., on the first Wednesday in May, 1880, for the purpose of revising the Pharmacopœia of the United States.

For the information and guidance of all parties interested, I refer them to the rules adopted by the convention of 1870, to be found on page 11 of the Pharmacopœia of the United States, and request their compliance with the spirit and intention of the said rules.

JAMES E. MORGAN, M. D.,

No. 905 E STREET NORTHWEST, WASHINGTON, D. C.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.—A regular meeting will be held on Monday evening next, May 5th, at eight o'clock, in the hall of the Boston Medical Library Association, 19 Boylston Place. Reader, Dr. W. H. Baker. Subject, A Case of Dermoid Cyst of the Ovary. Semi-annual election of members. Balloting at nine o'clock.

F. C. SHATTUCK, *Secretary*.

DELEGATES TO AMERICAN MEDICAL CONVENTION, PHILADELPHIA COUNTY MEDICAL SOCIETY.—S. D. Gross,¹ Albert H. Smith, H. St. Clair Ash, Albert Fricke, J. C. Wilson, C. N. Pierce¹ (Woman's Medical College), Frances Emily White¹ (Woman's Medical College), R. J. Dunglison, J. V. Shoemaker. The trustees of Jefferson Medical College have neglected to appoint a delegate to represent the board at the convention at Atlanta. Professor Gross represents the faculty of the college.

BOOKS AND PAMPHLETS RECEIVED.—Atlas of Histology. By E. Klein, M. D., F. R. S., and E. Noble Smith, L. R. C. P., M. R. C. S. Part I. Philadelphia: J. B. Lippincott & Co. London: Smith, Elder & Co. 1879. (A. Williams & Co.)

A Guide to the Qualitative and Quantitative Analysis of the Urine. By Dr. C. Neubauer and Dr. J. Vogel. Translated from the seventh German edition by Elbridge G. Cutler, M. D., Physician to Out-Patients at the Massachusetts General Hospital, etc. Revised by Edward S. Wood, M. D., Professor of Chemistry in the Medical School of Harvard University. New York: Wm. Wood & Co. 1879. (A. Williams & Co.)

On Diseases of the Abdomen, comprising those of the Stomach and other Parts of the Alimentary Canal, Œsophagus, Cecum, Intestines, and Peritonæum. By S. O. Habershon, M. D. Lond. With Illustrations. Second American from the Third Revised English Edition. Philadelphia: Henry C. Lea. 1879.

Sixty-Fifth Annual Report of the Trustees of the Massachusetts General Hospital. 1878.

How Shall the Degree of Doctor of Medicine be Conferred. By E. Fletcher Ingals, M. D. (Chicago Medical Journal.) 1879.

A Clinical Treatise on Diseases of the Liver. By Dr. Fried. Theod. Frerichs. In three volumes. Vol. II. Translated by Charles Murchison, M. D., F. R. C. P. New York: William Wood & Co. 1879.

Ophthalmia Neonatorum. By Richard H. Lewis, M. D. (Reprint from the North Carolina Medical Journal.) Wilmington. 1879.

¹ Delegates to Convention of Medical Colleges.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. C. — THURSDAY, MAY 8, 1879. — NO. 19.

LECTURES.

CLINICAL LECTURE ON CANCER OF THE FACE, INCLUDING "RODENT ULCER."

BY J. COLLINS WARREN, M. D.,

Instructor in Surgery in Harvard University and Surgeon to the Massachusetts General Hospital.

GENTLEMEN. — The disease we are to study is found in so many forms, I might almost say disguises, and runs so varied a course under changing conditions, that opinions differ widely as to its nature, and some of its forms not unfrequently pass unrecognized. It may be well to say at once that cancer of the lip is not included in this class, belonging to a different variety of cancers, and to diseases of the "mouth" rather than of the "face." We find these growths chiefly above a line running from ear to ear beneath the nose, occupying the upper part of the cheek near the eyelids, or the sides of the nose, or the temples. The following case is presented to illustrate one of their many phases. The patient who was operated upon two days ago, and whose wounds are healing rapidly, is, as you see, an old man. He is seventy-seven years of age. A small pimple was first noticed about eighteen months ago on the right temple, and he presented himself for its removal early in the autumn; at that time it had a papillary or nodulated look, and was somewhat discolored by dirty crusts of epidermis. It was superficial, not going beneath the skin, and did not exceed one half an inch in length. A growth on the cheek, just beneath the eye, too insignificant to meddle with at that time, has since increased in size, and, though still small, was removed the day before yesterday at the same time with a warty-like mass on the prepuce. On close examination you will be able to see that the skin has a look like that of many men of his age. There is a peculiar wax-like transparency of the temples and upper part of the cheeks, and just beneath the surface we can readily make out innumerable small yellowish bodies, at points so close together that they occupy a large part of the substance of the skin, and it is not difficult to recognize them as the sebaceous glands. As if to compensate for this extra softness of the skin, we find at certain points a thickening of the layers of the epidermis, forming little flat crusts, either of silvery whiteness, or,

when mixed with grease and dirt, of a brownish hue. These are not conspicuous blemishes, and might readily escape the notice of a casual observer. Indeed, the general effect of this condition is to produce an appearance with which every one is tolerably familiar in the complexion of many persons who have passed middle age, particularly in those who have a "weather-beaten" look. If we glance at the backs of the hands we shall find a similar condition of the epidermis, and in fact on the left hand we see a firmly adherent discolored crust, about a quarter of an inch in diameter, directly in the middle of the dorsal surface. His general health is excellent, and there has been no return of the disease in the cicatrix occupying the seat of the growth first removed. I have examined microscopically both specimens, but as the one last excised is the smaller of the two, and in an earlier stage of development, I shall describe that first. Having hardened it in "Muller's fluid," I made a number of vertical sections, so cut as to include a portion of the adjacent sound skin. On the edges of the section we see the follicles of one or two lanugo hairs and the accompanying sebaceous glands, which appear decidedly out of proportion in their great size to the other structures. The epithelium and papillæ are normal. As we approach the diseased part we find the epidermis elevated by clumps of epithelial cells, which project downwards into what appears to be a distended hair follicle, at the bottom of which is a sebaceous gland, whose opening is choked with the same material, and whose contents are indistinct and opaque. The walls of the follicle appear to be thickened. The further development of the disease is better studied in the other specimen. Here we find masses of epithelial cells occupying the upper layer of the skin, and corresponding in situation and shape to the sebaceous glands seen on either side, which show changes indicating that they are soon to be involved. A more advanced condition still is to be seen in a specimen which I removed from the brow of an old man last spring. The growth was half an inch thick, and had penetrated nearly to the subcutaneous tissues. It was somewhat elevated above the level of the skin, and had an ulcerated surface, and a base of about the diameter of half a dollar. The condition of the complexion was characteristic, and there were two small growths on the nose excised at the same time. These show the various stages of the same disease from the formation of little lobulated clumps of epithelial cells just beneath the surface to the development of tortuous masses of cells closely packed together, separated only by a delicate and scanty stroma, and involving the entire thickness of the skin, obliterating all other structures. The character of the individual cells is worthy of notice; they belong chiefly to a smaller type of epithelium than the fantastic forms seen in cancer of the lip. Occasionally we find the concentric arrangement, the epidermic balls seen in the latter disease, but this is rare.

I have thus sketched for you a type of cancer which is perhaps the most common variety seen in this region. Both the outward form and the microscopic appearance of these cancers may vary considerably. There may be more growth above the surface, forming a warty or pediculated tumor seated on a little patch of the same disease as a base. The microscopic structure is about the same as in the case just described. Although there is much disturbance of nutrition of the skin, the development of cancer is usually confined to one spot; yet it may be, as we have seen, multiple. Sometimes the disease appears to be just beneath the surface, which is unaffected, but elevated here and there into little humps. Here the clusters of cells are "lobulated" in form; again we have a wart-like form of growth. All these growths, if left to themselves, sooner or later break down in the centre, where a scab then covers an excavation of greater or less extent; but in certain varieties the retrograde changes make themselves manifest from the beginning, and keep pace so evenly with the new growth that the disease from the outset assumes the form of an ulcer.

When observed in its earliest stages of development and in its most typical form, the ulcer is in shape and size similar to a horn waistcoat button, having a flat, depressed centre and a narrow, evenly formed rim. In appearance it is not unlike a vaccine vesicle at a certain stage. There is the central scab and the narrow, pearly border. This resemblance is more striking if we look at the growth through a large hand lens, an instrument which I find useful in examining all doubtful growths about the face. When seen at this stage it is about three eighths of an inch in diameter; the centre frequently appears to have healed over; the little button sits loosely in the surrounding skin, which is perfectly normal in look up to the very edge of the growth. As the disease advances, which it does very slowly, its ulcerating character becomes more apparent. It may take years to double in size. Sometimes one portion of the rim will suddenly begin to grow out of all proportion to the other parts, and we have the ulcer replaced or masked as it were by a tumor. Usually, however, it continues to spread slowly, but is still as superficial as ever; and if the patient live long enough it may cover large surfaces, involving the nose, the eyelids, or the eye itself. Its growth is somewhat hastened by the use of salves and caustics, and if tampered with too much it may assume a very malignant type, penetrating even the bones of the skull. It is to these formidable conditions that the names *lupus exedens* and *ulcus tangere* have been applied. In the earlier stages it is best known under the name of rodent ulcer. From its tendency to ulcerate and the vigorous applications of caustics, portions of the cancer tissue are sometimes obliterated, and the base of the ulcer may then be composed almost exclusively of cicatricial tissue, of which there may be occasionally a very large amount.

We must therefore hunt for the cells in the edge of the ulcer, where they will be found only after careful preparation and search. Owing to this fact, the true character of the disease frequently has been overlooked, and even to this day there are many surgeons who do not recognize it as a form of cancer. Formerly this was the universal opinion. I have seen such growths pronounced by an expert microscopist inflammatory or sarcomatous ulcers, when I have been able after patient search to demonstrate satisfactorily the cancerous structure. The most common arrangement of the cells is, in my experience, that known as "tubular."¹ Not that the cancer cells form hollow tubes, but they lie in solid masses in a tube-like system of canals, which anastomose more or less freely with one another. The epithelium is very small and delicate, and reminds one strongly of that seen in the rete mucosum, near the borders of the papillæ, or in the sheath of the hair follicles, to which it is stained in a similar manner by carmine; but occasionally, as I have shown,² we may have at certain points a larger epithelium, around which there is a concentric arrangement of cells, as in the more characteristic forms of cancer. This form is not constant; occasionally we find alveoli of oblong, circular, or tortuous shape filled with these cells, and in the centre sometimes an epidermic ball. So far as the development of this variety is concerned, I may say that I have found the cancer cell masses at points to be continuous with the interpapillary epithelium, as if there had been an abnormal ingrowth of the epithelial covering into the parts below, simulating the changes observed in foetal life when the papillæ of the skin are formed; but one may examine a good many sections before finding any continuity of the disease with the normal epithelium. I have never been able to discover any connection with the sebaceous or sudoriparous glands. In the further *progress* of the disease we may find, in any of the varieties we are now considering, that the method of development may vary from that described. I have shown elsewhere³ that the wandering cells may play a prominent part. The precise limits of this much discussed and investigated question, the origin of the cancer cell, remains still, in my opinion, unsettled. The weight of authority is now undeniably in favor of its direct origin from normal epithelial structures. I have, however, had satisfactory proof that in some instances this is not the case, and, although epithelium may exert an *action de présence*, as the French

¹ Dr. Thin, of London, and Professor Tiersch, of Germany, believe this variety originates from the sudoriparous glands, the former considering it an adenoma.

² Anatomy and Development of Rodent Ulcer, Plate 2.

³ "It seems justifiable, therefore, to conclude, from the data afforded by these observations, that, in some instances at least, the cancer cells are in no way connected during their development with previously existing epithelial structures, and that we are to seek for their origin rather among the young cells of new formation, which are present in large numbers, and with which the cancer cells appear to come in intimate relation." (Anatomy and Development of Rodent Ulcer, page 57.)

term it, that the connective tissue cells may be the parents of the cancer cells. But it is not of so much practical importance to determine the *origin* as the *nature* of these various forms of growth, and what I wish to impress upon you is that they are, one and all, varieties of cancer. They correspond to that class described by Tiersch in his admirable monograph as flat or superficial cancers, in distinction from the infiltrating (*tiefgreifend*) form, of which cancer of the lip is the type.

The ulcerating form is most frequently seen about the nose or eyelids, but I have lately observed one typical case on the neck below and behind the ear. The patient was a man seventy years of age, and the ulcer, the size of a quarter of a dollar, of two years' standing. There was a great deal of cicatricial tissue at its base which was slightly adhered to the muscle, and the "crow's-feet" folds of skin showed that there had been more loss of substance than was apparent. He had used no caustics. Under the microscope it required a great deal of patient search to find a spot sufficiently typical of cancer to place its true nature beyond a doubt. This is what Billroth would probably call *scirrhus cutis*. These cancers of the face are chiefly found in old people, although I have seen them in comparatively young individuals. They usually begin between the fiftieth and seventieth year.

There are clinical as well as anatomical data which give evidence of the nature of the disease. It is true that we do not find any affection of the adjacent glands, but the disease may spread rapidly, and become very destructive. Under these circumstances we find a corresponding change in its microscopical appearances.¹ The growth is essentially an infiltrating one, destroying rather than pushing aside the healthy tissues. Occasionally it returns after extirpation, but this is usually due to an instinctive unwillingness on the part of the surgeon to destroy a larger surface of the face than is absolutely necessary, and a minute fragment of diseased tissue may thus be left behind. There are, however, instances where a considerable interval of time elapses between the removal of the cancer and its subsequent return.

If the growth is excised it should be wiped carefully, and examined with a hand lens, if small, that we may be sure that the knife has not cut through diseased tissue. If you are sure of your bearings, determined carefully beforehand with a lens, it is surprising how close to the disease you can steer with the knife without fear of cutting into it. If the cancer is of the size which usually drives people to seek relief, there is no danger that the wound may cause ectropion if near the lid, provided we bring the edges together so as to form a linear cicatrix on a line radiating from the centre of the pupil. It is very common, after excision, that patients suppose the disease to have returned in the

¹ Case of *Noli me Tangere*, the JOURNAL, vol. xcv., page 508.

cicatrix, the nodulated character of which on so sensitive and conspicuous a surface is deceptive. On one occasion I removed such a scar, and found the second cicatrix as suspicious in appearance as the first, a condition which shortly after disappeared. Since then I have been obliged to calm more than one patient's fears, and always with the same result. Those who are afraid to use the knife sometimes scrape out the disease with a sharp spoon. The loss of substance is supposed thus to be reduced to a *minimum*. The use of caustics is nowhere so popular as on this region of the body, and they are to be advised in the very earliest stages of the disease, provided we can burn it out in a couple of "sittings." Nothing can be worse than frequent applications of nitric acid, on a stick or glass rod, to the surface of the growth. When there appears to be little more than an abrasion of the skin an ointment of chloride of zinc in the strength of two grains to the ounce may prove effectual. The zinc may be applied rubbed up with equal parts of fresh plaster of Paris, as recommended by Bryant, as it destroys and dries them. The most efficient substitute for the knife is a pointed stick of nitrate of silver, with which the disease should be thoroughly bored. By pinching up the fold of skin surrounding the mass with one hand, the parts to be burned are made more accessible, and the pain is diminished.

Is there such a thing as prophylactic treatment? A great deal can undoubtedly be accomplished by proper attention to the hygiene of the skin. In old people, as we have seen, there is the tendency to derangement of the epithelial structures which exists also in childhood, as may be shown on almost any boy's hands. The formation of crusts or scales should be regarded with suspicion, and any tendency to a disturbance of function of the sebaceous glands should be corrected. Crusts may be removed, according to Bush,¹ by the application of soda on cloths (from one to two and five tenths per cent.), and subsequently washings with a weaker solution. It would seem almost needless to say that a judicious use of soap should be a daily habit. The "pores" should be kept well "open." Esmarch recommends the use of Fowler's solution, one drop three times a day, gradually increasing, till intolerance of the remedy follows, to prevent a return. I have never tried it.

You will observe that in the description of these affections I have not used the term epithelioma. This name was first given to cancers of the face, when the epithelial character of cancer in general was not recognized. They were then thought to be quite a different disease, the epithelial structure being a striking feature. The term should now be discarded altogether, or substituted for that of cancer, in whatever part of the body it may occur.

¹ Recent Progress in Dermatology, Dr. J. C. White, the JOURNAL, vol. xcix., page 767.

TREATMENT OF INGROWN TOE NAIL.

BY GEORGE W. GAY, M. D.,

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In a late number of the *Philadelphia Medical Times* may be found an elaborate paper on the above subject, in which the writer, Dr. Hunter, gives a careful description of what he considers the best method of treating ingrown toe nail. It is a modification of Gosselin's operation, and consists in scraping a longitudinal groove in the nail, brushing the granulations with collodion, introducing small pledgets of cotton under the edge of the nail with a probe made for the purpose, and wrapping the toe in adhesive plaster in such a manner as to draw the diseased tissues away from the nail. Bad cases require four or six weeks' treatment, and even then the disease is likely to return unless the cause has been removed.

Neither in that paper, nor in the discussion by prominent surgeons which followed its reading before the Philadelphia County Medical Society, was any allusion made to an operation for the radical cure of this affection, which in this city and vicinity has in a great measure supplanted all others during the past half a dozen years. We refer to Dr. Cotting's operation,¹ which may be performed as follows: The patient having been etherized, all the overlying tissues, with a portion of the side of the diseased toe, are sliced off freely (Figure 1, *a c*), leaving the edge of the nail clearly exposed and uncovered. The incision should commence well back, as is shown at *d e*, Figure 2, and should expose all of the border of the nail as far as the matrix. There is more danger of cutting off too little than too much. The nail itself need not be interfered with, as nothing will be gained by scraping or removing any portion of it.

The comparative size and depth of the portion removed, with its outlines, are indicated in Figure 1, *a c*, and in Figure 2, *d e f*. The wound may be treated with simple dressings, and in the majority of cases is well in two or three weeks. Occasionally, the patient is not laid up more than a day or two after the operation, but continues his occupation during the whole period of convalescence. The same kind of a boot may be worn after recovery as when the affection began, without fear of a return of the disease.

"Thus," to use Dr. Cotting's words, "as may be seen, the operation is a very simple one; but it differs from all others hitherto described in itself, and in the principle on which it is founded,—that of cicatricial contraction."²

¹ *VIII. JOURNAL*, January 2, 1873.² *Loc. cit.*, page 2.

As a fair illustration of the good results of the operation we give the following case, in the words of the patient, premising, however, that at the time of the operation he was completely disabled, laid up at home, and unable to walk on account of the excessive tenderness of the parts. The toes were very much enlarged and club-shaped. The disease completely covered the edges of the nails at their sides and ends, from under which pus was constantly oozing. As in all bad cases, it was simply impossible to pass lint or even a probe under any part of either of the nails. Both sides of the great toes were thus affected, and both were operated on at the same time. The portions removed were quite an inch in length, three quarters in width, and half an inch in thickness. The tendency to bleed from the cut surfaces was considerable, owing to the inflamed state of the parts, but this was readily controlled by a compress of lint and a narrow roller bandage, the whole being covered with oiled silk.

The patient in a recent letter writes as follows: "I was troubled with ingrowing toe nails three years previous to the operation, and had tried all kinds of methods of cure, but without success. At first lint under the nails, then caustic; after that all kinds of salve were tried. These failing, large pieces of the nails were removed repeatedly, with the after-application, at times, of something to burn the diseased flesh. This last would temporarily ease me; but as soon as the nails commenced to grow again they would become more painful than before. Dr. Cotting's operation was performed in March, 1873, and since that time I have felt no return of my old trouble. My toes healed in about three weeks, and are now perfectly natural in appearance."

The distinguishing feature of this operation is that as the wound heals the cicatrix contracts and draws the tissues away from the nail, leaving its edge free (as at *b*, Figure 1), so that it is hardly possible for it to become infleshed, or buried in the soft parts, in the future.

This operation has been performed many times at the Boston City Hospital; in fact, it is about the only one for this affection that has been done there for several years, and so far we have never seen a failure, nor a case in which the cure was not complete, permanent, and satisfactory.

THE USE OF THE FREEZING MICROTOME.

BY MORRIS LONGSTRETH, M. D.,

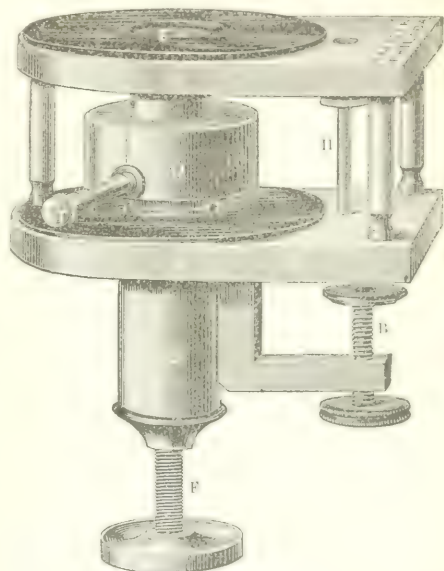
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THE subject of freezing microtomes is not a new one, but the instrument or apparatus which I am now using presents some advantages which I have found lacking in the previous inventions, so that a description of it may prove interesting. Nothing needs to be said of the great

utility in this method of preparing sections of tissues for microscopical examination since the appearance of the numerous journal articles on the subject by Rutherford, Bevan Lewis, Hughes, and others during the last few years. I am, however, making a further use of it in cutting sections of already hardened tissues, merely freezing them fast to the plate of the instrument, thus saving the labor of embedding them in paraffine or wax, and the manipulation necessary to freeing the sections from the embedding material before mounting them.

The instrument has four essential parts: first, an ordinary microtome, such as can be firmly fastened to a table; second, a chamber into which the spray is injected and condensed, and on the upper surface of which the tissue is placed to be frozen; third, a section-plate, arranged above the condensing chamber; and, fourth, a hand-ball atomizer with metal tubes (Codman and Shurtleff's).

The wood-cut shows the ordinary microtome with screw clamp for fastening it to a table; above it is the section-plate resting on three legs and fastened firmly to the microtome by a binding screw. The top of the section-plate is provided with a glass plate having a round hole, through which the tube of the condensing chamber passes when advanced by the micrometer screw. The tube of the condensing chamber is provided with a small aperture made in the side of it (not shown in the wood-cut), and just below the surface of the brass cap which closes the upper end of the tube. The nozzle of the atomizer is introduced into the aperture of the tube, and the spray produced by using the hand-ball. Ether may be used, but I have confined myself to rhigolene entirely, the applicability of which to freezing by



A. The section-plate of the microtome. B. The clamp for fastening the instrument to a table. C. Embedding chamber. D. Freezing and condensing chamber, screwed fast to the plug in the embedding chamber. E. The top of the tube or cylinder of the condensing chamber on which the tissue is placed to be frozen. The condensing chamber is raised and lowered by the micrometer screw, F. G. The section-plate for the freezing microtome, resting on three legs, and fastened firmly to the microtome by the binding screw, H. This section-plate has a circular opening, through which the tube of the freezing chamber moves. T. Escape tube to draw off the condensed rhigolene or ether. The opening in the tube or cylinder of the condensing chamber into which the nozzle of the atomizer is introduced is not shown in the figure, being concealed by the section-plate, G.

means of the spray apparatus being first described in the *JOURNAL* for 1866.

The tissue which is to be cut is placed on the brass plate closing the end of the tube of the condensing chamber. I have found an advantage in using a drop or two of gum water, or, better still, the fluid recommended by Rutherford as an embedding substance in his freezing microtome. It consists of gum arabic five ounces, water nine ounces, and spirits of camphor two fluid ounces, the camphor making the mixture when frozen less brittle, and keeping it about the consistence of cheese. The advantage of using the gum solution is that the tissue is made to adhere better to the smooth brass, and is not so liable to be broken off from it when making the section should the tissue become too much frozen.

The section knife can be kept cold by placing it on a block of ice or by directing the spray from the atomizer upon it for a moment or two. It is necessary that the blade should be cold when making sections in summer or in a very warm room, because the sections melt very rapidly and become rolled into a mass difficult to unfold. During the winter, even in the warmed laboratory, I have not found it necessary to use ice for this purpose, and only rarely do I cool the blade with the spray.

As the sections are cut I transfer them from the blade of the knife, or from the brass plate where they fall, to small cups containing an appropriate solution, by means of a needle mounted in a holder. Usually the sections as cut roll up in small rolls; the thinner the section the closer is the roll. With some tissues the rolls are with difficulty unfolded, but by passing the needle through the centre or hollow axis of the roll, then transferring it to the solution in the cup by gentle manipulation, the thin section uncoils and floats out smoothly. Frequently air bubbles become entangled in the roll when dropped into the solution, and cause the section to float: as soon, however, as the uncoiling is effected the tissue sinks. Many tissues, however, and especially those which have been previously slightly hardened by reagents, unfold themselves as soon as they are placed in the cup, and require no further manipulation.

The sections obtained by this means can be made of the greatest thinness and perfectly even: their areas are limited only by the size of the brass plate closing the tube of the condensing chamber. The instruments as now made by Mr. William H. Walmsley, the manager for R. and J. Beck, in Philadelphia, have brass plates either one inch or one and a half inches in diameter.¹

¹ Mr. Walmsley has been very kind in carrying out my suggestions in making this instrument perfect, as I believe it to be, as modified from the one used at the West Riding Asylum, England, and described by Mr. Bevan Lewis in the *Journal of Anatomy and Physiology*. Mr. Walmsley, 921 Chestnut Street, Philadelphia, has kindly furnished the cut for illustration.

The majority of sections that I have made with the instrument are of fresh tissues, but I find a great convenience in the use of it for cutting tissues which have been partly or completely hardened, whether by aqueous solutions or alcoholic. When alcohol has been the hardening agent it is necessary to remove it by soaking the tissue in water for a short time before the specimen can be frozen. If the tissue is thoroughly hardened it is necessary merely to freeze it fast to the plate, which can be done almost instantly. I have found very great advantage from the use of the instrument in making sections of membranous tissues, such as the intestine, an arterial or venous wall, or a thickened pleura, or the peritoneum, — tissues ordinarily very difficult to embed. To get vertical sections of these tissues I first spread out a drop of the gum solution on the brass plate, then with two needles or pair of forceps hold the membrane so that its edge just touches the plate; in an instant the spray directed into the aperture of the tube freezes the gum solution and fixes the tissue in place; then, removing the nozzle of the atomizer tube from the aperture, I direct the spray directly on the tissue, taking care that the current is parallel to the length of the membrane; in almost as short a time as is required to fix the membrane to the plate the whole is frozen and stands erect in a vertical plane, provided that at the moment of freezing a slight tension is exerted by the needles or forceps. If the position in which the tissue becomes fixed is not satisfactory a warm breath relaxes it in a moment, and the adjustment can be corrected. In making sections of such delicate tissues or very small fragments it is essential that the blade of the knife should be kept cold.

Another and very important use which I have made of the instrument — and an employment destined to be more and more commonly made of it — is the examination of tissues from the living subject. The surgeon in excising new growths is desirous of carrying his scalpel through perfectly healthy tissues, and of removing all the surrounding parts which are becoming infiltrated with the malignant products. The determination of this question, and therefore the completeness of the operation, is often a difficult matter. It is not possible with the naked eye to be absolutely certain that all the affected parts have been removed, and how frequently it happens in examining with the microscope the periphery of tumors after removal, for example, tumors of the breast, that a deposit of malignant cells is found in the adipose tissue, often far from the growth in the gland. A small fragment of tissue, whether suspected or not, can be immediately frozen and cut, and the examination made before the wound of operation is closed. I have within the last six months made several such examinations during operations at the Pennsylvania Hospital. Recently, also, through the kindness of my friend Dr. L. A. Dohring, I have had the opportunity of using the instrument in making sections of diseased skin taken from

living patients. The sections were made and mounted ready for microscopic examination before the blood had ceased flowing from the small incision. The fragments of skin were in some cases not one fourth of an inch in length, and probably less than one eighth of an inch in breadth,—fragments so small that the attempt to harden them in reagents resulted in their complete disintegration and loss.

Recently, also, I have been able to obtain sections of the contents of cysts *in situ*, both from ovarian tumors and from cysts occurring in a fibro-cystic growth of the uterus.

Now that the method of freezing is so widely and generally used in making sections of tissues, it is not necessary to defend the process from the charges formerly made against it, namely, of cold producing alterations in the cells, etc. In fact, the tables are turning, and those who use the old hardening process and the tedious embedding of tissues are called upon to defend their methods against such charges.

One word more concerning the subsequent manipulation and mounting of sections made by the freezing process. As before related, I usually transfer the sections to cups containing appropriate solutions, but frequently the sections are placed directly on the slide and there stained, etc., and mounted. By this latter method nearly all the cells contained, in a section are retained, even if displaced from their original site.

In mounting the sections, which in the first place were transferred to a cup, I usually place them on the slide and perform all the manipulations necessary while they are on the slide. The advantage of this method is that the sections are saved from the danger of breaking or tearing to which unhardened tissues are necessarily peculiarly liable in the process of transference from one dish to another. By this method the section is always floating, and rarely needs to be touched by the needles; the disadvantage is the greater waste of reagents.

The difference in the appearance of tissues sectioned by freezing and those cut after hardening in alcohol, for example, a normal kidney prepared by the two methods, is very great. A normal kidney hardened in alcohol more nearly resembles a section of contracted kidney made by the freezing process. I do not find that sections of frozen tissues when treated with the alcohol, necessary to transferring them to oil of cloves and dammar, are much altered by this reagent, at least not nearly so much so as when hardened by it previously to sectioning. In this brief notice of the freezing microtome and the uses to which I have applied it, only a few of my experiments have been mentioned, and I have not considered it necessary to speak of the various solutions, reagents, and staining fluids which I commonly employ. Different tissues require different treatment by reagents and staining fluids, and each worker has his own peculiarities and favorites. To make this part of the subject complete, a catalogue of the various organs of the body would be necessary.

RECENT PROGRESS IN ORTHOPÆDIC SURGERY.

BY R. H. BRADFORD, M. D.

Caries of the Spine: Plaster-of-Paris Jackets. — The advantages of Dr. Sayre's method of treatment of Pott's disease are shown in a paper written by Mr. Willett, of St. Bartholomew's Hospital, and published in the Hospital Reports.¹ Mr. Willett wishes "to express unhesitatingly the satisfaction he has experienced in the treatment of both angular and lateral curvature of the spine by suspension and the application of the plaster-of-Paris bandage," a method of treatment which he says is now adopted in all the large London hospitals. His conclusions are based upon sixty cases of caries of the spine treated according to Dr. Sayre's method. An analysis of these cases is given. He adds: "The most eloquent testimony in favor of Dr. Sayre's method is the eagerness with which children who have once experienced the ease which the plaster jacket has afforded them have craved to have it left on" when it has been necessary to remove it. Mr. Willett has not been able to satisfy himself that the change in the outline of the spine during suspension is due entirely to the pulling apart of the diseased vertebræ. He also finds that the time needed for a cure is longer than that stated by Dr. Sayre.

Dr. N. Shaffer, of New York, in a paper² read before the Academy of Medicine, points out the disadvantages of the plaster-of-Paris treatment. He says that plaster jackets are heavy and filthy, that excoriations and chafing may arise and progress without being known, and that the application is attended with danger and difficulty. He claims that as a support a plaster jacket is a failure when the disease is above the seventh dorsal vertebra, that the "jury-mast is inoperative, and that the principle of antero-posterior support is the correct one in the treatment of the affection." He believes that continued extension and counter-extension which could be maintained with any degree of efficiency is impossible.

In regard to the dangers attendant on suspension employed during the application of "plaster jackets," Mr. Willett mentions that vomiting occurs quite frequently while adults are suspended, and that in some cases there is fainting. In one case³ syncope seems to have taken place during the application of a plaster-of-Paris bandage upon a child, accompanied by a temporary paralysis of the muscles of the neck. No fatal cases have been reported, except one mentioned by Mr. Willett. Vomiting began shortly after the application of the jacket; the jacket was removed, but the vomiting persisted, and the patient died in two

¹ Vol. xiv., 1878.² New York Medical Record, No. 2, page 177.³ Lancet, February 8, 1879, page 214.

days. At the autopsy, a chronic dilatation of the stomach was found. The application of the jacket was apparently the exciting cause of death, though the method of treatment can hardly be blamed for the termination of the case, as an unexpected organic lesion was discovered.

Respiration is not much interfered with, according to Mr. Willett, by the plaster-of-Paris jacket; in two patients, however, both paralyzed from disease in the upper dorsal vertebra, an attack of acute bronchitis produced such urgent dyspnoea that it was necessary to remove the jacket. Two somewhat similar cases are mentioned by Madelung.

To avoid the difficulties and dangers of suspension in the usual way, Dr. Reid¹ recommends a modification of the apparatus described by Dr. Sayre. The arrangement for suspending the head and neck is similar to that in general use, except that a separate pulley and rope are used for the head. Suspension of the trunk is made by means of adhesive plaster applied to the trunk. Plasters "two and a half inches wide are applied along the back, across the shoulder down the body, leaving a loop (above the shoulder) for suspension." An ordinary bandage is wound round the body to retain the plaster, a rope passed through each loop, and the patient can be hoisted and hung without danger as long as necessary. The plaster-of-Paris bandages are applied in the ordinary way.

Walker² believes that suspension is not a necessary part of the treatment of caries of the spine. He writes: "That a jacket should be effectual, it is a *sine qua non* that it shall be applied when the spine is in such a position that the diseased vertebræ shall be free from all pressure, and the deformity, if deformity exist, be reduced to a minimum. This condition is found when the patient is suspended, as recommended by Dr. Sayre, but it also obtains in an equal degree when the patient is laid flat on the back."

To make the application of a bandage on a patient in a recumbent position practicable a many-tailed bandage is used. The separate strips are soaked in plaster of Paris mixed with water, to which mucilage of acacia is added to prevent too rapid setting (proportions, one pound of plaster of Paris, one ounce of mucilage of acacia, and eight ounces of water) of the plaster. The strips are arranged and the patient is laid upon them; they are then folded around the patient. Two layers of bandages are usually enough for a child, while three are needed for an adult. Mr. Walker summarizes his opinion as to the treatment of caries of the spine, based upon an experience of seventeen years, as follows: "The main object of the treatment of angular curvature of the spine should be the maintenance of the affected bones and joints in a state of absolute rest, and that in the position most favorable for the

¹ New York Medical Journal, July, 1878, page 37.

² British Medical Journal, March 1, 1879, page 306.

cure of the disease without deformity. This position is found when the patient is placed comfortably in a recumbent position."¹

On the continent of Europe the treatment of caries of the spine has been until recently almost entirely the enforcement of rest in a horizontal position. Kormann,² in a very comprehensive review of the literature of the treatment of disease of the spine, quotes from all German authorities on the subject, who were almost unanimous against any treatment except that requiring confinement to bed.

In a discussion at the French Academy,³ the opinion of the leading French surgeons on the subject was brought out. Verneuil, Despres, Marjolin, Trelat, Ollier, are all quoted as in favor of treatment by the enforcement of absolute rest in a horizontal position for a long time.

Madelung, of Bonn,⁴ however, has recently published a paper in which he expresses great satisfaction in the new method of plaster-of-Paris treatment of caries of the spine introduced by Dr. Sayre. He has tried it in thirty-eight cases. He mentions that the method is finding favor in Germany, and has been accepted by Langenbeck, Hueter, and others. He thinks the principle underlying the treatment introduced by Dr. Sayre has been sufficiently demonstrated to be regarded as established, although the technique may be improved upon hereafter.

Dr. Wyeth,⁵ and Dr. Stillman⁶ who claims priority, describe a method of treating spinal curvature by continuous extension. A plaster-of-Paris jacket is applied, consisting of "two segments which come nearly together at the point at which the lesion is situated;" these two are connected by rods, which are arranged so that they can be elongated and the amount of pressure upward and downward regulated at will. In the discussion which followed Dr. Wyeth's paper before the New York County Medical Society, Dr. F. H. Hamilton stated as his opinion that the value of extension of the spine in the direction of its axis was not as great as has sometimes been supposed. The muscles which are constantly strained in the effort to prevent the body from suddenly falling forward and causing painful pressure upon the seat of disease are relieved by extension, but if the patient is suspended no extension is made which reaches to the seat of the disease. A plaster jacket is incapable of maintaining extension of the spine. When a plaster jacket is applied, the arms being lifted, the chest is expanded; when suspension is removed, the thorax collapses and "telescopes within the plaster jacket," and extension of the spine becomes practically nothing.

¹ See also Owen, *Lancet*, November 23, 1878, page 734.

² Bericht über Heilgymnastik u. Orthopædie, Schmidt's Jahrbuch, 1878, Bd. 179, No. 9, pages 265 and ff.

³ *Gaz. hebdomadaire*, December 7, 1877, page 780.

⁴ *Berlin. klin. Wochenschr.*, February 5, 1879, page 57.

⁵ *Hospital Gazette*, January 30, 1879.

⁶ *New York Medical Record*, February 22, 1879.

As a substitute for plaster-of-Paris bandages, Mr. Adams¹ recommends a preparation of felt, which, when warmed, is quite flexible, but which becomes hard in a few minutes.

Dr. Coover² uses silicate-of-potash bandages instead of plaster-of-Paris bandages. The former are much lighter, but they require three hours in order to become dry and hard.

Dr. Gibney gives the following figures to show the results of treatment of caries of the spine, as indicated by the tracings of the spine in one hundred and six cases. The treatment consisted of the application of a corset strengthened by strips of steel (the details of which are given). In ninety-two there was no increase of curvature. In four the curve there was a decrease. In fourteen there was an increase of these of one eighth to one half an inch. Of these, thirty were under observation from two to six months; ten, six to nine months; eighteen, nine to twelve months; twenty-six, one to two years; four, two to three years.³

(To be concluded.)

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.⁴

ADJOURNED MEETING.

APRIL 21ST. *Conclusion of the Discussion on the Abuses of Medical Charities.* — Dr. F. R. Sturgis, the author of the paper under discussion, gave a *résumé* of the principal suggestions for the institution of reforms which had been made by the various speakers at the last meeting, and spoke particularly of the points raised by Dr. Piffard: that this society had no authority to control the action of the profession, and that it was no use to appeal to the legislature for the prevention of the organization of still other dispensaries, since, according to the present law, they were obliged to grant a charter for such an institution to any five individuals who chose collectively to apply for one.

Prof. D. B. St. John Roosa, president of the New York State Medical Society, said that he wished to speak mainly on two points. In the first place, he agreed with Dr. Sturgis that the medical profession was to blame for the present condition of affairs, and he believed that the evils existed not only in the dispensaries, but also in the large hospitals. He thought it a crying shame that wealthy patients should be treated in elegant private rooms in these institutions, and yet that the physicians or surgeons who attended them should be

¹ British Medical Journal, August 24, 1878; also Lee, Philadelphia Medical Times, March 15, 1879, page 277.

² Philadelphia Medical and Surgical Reporter, April 13, 1878, page 281.

³ For other references in regard to the treatment by plaster jackets, see Lancet, June 23, 1877; February 2, 1878, page 167. British Medical Journal, February, 1878, page 280; January 5, 1878. Edinburgh Medical Journal, September, 1878, page 215. Dublin Journal of Medical Science, December 1, 1877. Glasgow Medical Journal, September, 1878, page 104. Medical Press and Circular, September 4, 1878, page 180. Cincinnati Lancet and Clinic, December 7, 1878, page 429.

⁴ Concluded from page 611.

allowed no compensation. These were, therefore, not hospitals at all, in the proper sense of the term, but simply boarding-houses for people who wished to shirk their doctors' bills; and he considered such practices a fraud upon the dead men and women who had given their money for the establishment and maintenance of these so-called charities. If the medical staff connived at this outrage, it was a great wrong to themselves, and a still greater wrong to their professional brethren. The second point was that the medical profession could remedy the evil if they should unitedly take a firm stand, and absolutely refuse to attend any patient whatever (whether in hospital or dispensary) who was able to pay a fee. This unanimity of action, however, was essential to the success of the movement, or else the whole matter would come to naught. But, even if we failed now, Dr. Roosa believed that this agitation would have great influence in molding public opinion, and would go far towards bringing about that time when the profession would refuse to be dictated to any longer, and would demand the desired reforms as a matter of right. He felt perfectly confident, he said, that the day was coming when only paupers would be treated in dispensaries, and only paupers would be lodged in hospitals.

Prof. Willard Parker said that when he first came to New York, forty years ago, the condition of affairs here was entirely different from what it is now. Then there was only one hospital, the New York (which was indeed the only hospital in the city for more than eighty years), three dispensaries, and one eye infirmary; and there was no trouble at all, as these institutions were ample for the care of all the sick poor, and the physicians had plenty of work among the better classes. The population was then estimated at three hundred and twelve thousand. About the time of the great Irish famine, in 1846, however, there commenced an enormous influx of foreign immigrants (so that by 1850 there had been an increase of more than two hundred thousand in the population), and since then, with the growth of the huge tenement-house system, there had occurred a complete change in the city. With the presence of so many suffering poor in their midst, the people of New York (whom he believed to be more ready to respond to appeals for charity than any others upon the face of the globe) felt imperatively called upon to provide for their wants. About the year 1850 St. Luke's Hospital was founded, and since then hospitals and dispensaries had been multiplied to a marvelous extent, and, indeed, until they had become in many instances a curse rather than a blessing. There was therefore, at the present day, far too much indiscriminate charity, and people seemed to think that when they had given a sufficient amount of money their responsibility ended, not taking the trouble to see that it was judiciously expended by those to whom they entrusted it.

There were three classes in the community requiring the services of the medical profession: First, the well-to-do people, who paid the doctor cheerfully. (He was sorry to say, however, that this class was now considerably smaller in proportion to the population than it was forty years ago.) Second, the honest poor, or "God's poor," as they were sometimes called, who did the best they could, and were sure to pay the doctor sooner or later, although it might be but a small fee. Third, the pauper class, or "the devil's poor," of which there was an enormous number in this city at the present time, who

never paid anything at all, and who were dependent on the taxpayers for their support. The curse of intemperance, he thought, was to a great extent responsible for the large proportion of this class in the community.

The only remedy for the abuses mentioned that Dr. Parker could see was for the medical profession to make a strong effort and help itself, and in this he believed that they would be seconded by the taxpayers of the city. Such an effort would be directly to the advantage of (1) the physician, (2) the taxpayer, and (3) the recipient of charity. The tendency at the present day was to make drones out of a large number of the masses, altogether unproductive, and only a curse to the community in which they lived. As long as they were fed, clothed, and taken care of when sick by the city, or by charitably disposed private individuals or institutions, there was no incentive whatever to help themselves, and people thus accepting the bounty of others soon lost all sense of self-respect. As soon as these people were compelled to work for themselves, however, the manhood in them would assert itself, and they would no longer be the dependent creatures that they were before. He thought that it would perhaps be a good thing that this society should make the request of the managing boards of the various dispensaries in the city that they should appoint delegates to hold a conference with a special committee appointed for the purpose from the society, in regard to the remedying of the abuses which now prevail in these institutions, and that it was desirable that this committee should strongly urge upon the members of the boards the advisability of charging all patients who could afford it a small sum for medicines, as had been done at the New York Dispensary.

Dr. M. H. Henry believed that there never was an evil in the world which could not be remedied. Here he thought the remedy to be that medical charity should be confined exclusively to the regular district dispensaries in the city, and that these institutions should treat only the really destitute. Another aid to the removal of the abuses would be to open all hospital and dispensary appointments to competitive examinations; and still another, to diminish the number of physicians annually graduated by requiring examinations preparatory to attending lectures, and by generally raising the standard of medical examination. There should properly be only about one physician to every thousand inhabitants, but if we were to go on at the present rate of turning out doctors from the various schools, we would soon have one for every fifty. If these matters were attended to, he believed that the medical men of this city would be able to make a respectable livelihood.

Prof. A. Jacobi said that there could be no doubt that if there were fewer physicians there would be much less abuse to complain of, and he agreed with Dr. Henry that the present manner of making dispensary and hospital appointments was radically wrong. Whenever a vacancy occurred there were dozens of applicants for the place, all of whom based their claims to it upon the number of signatures of prominent medical men which they were able to show upon their letter of application, and there were many physicians of eminence who were willing to sign anything of the kind that was presented to them. Another abuse was that there were large numbers of men who used their dispensary appointments for making practice for themselves out of the better class of patients, while properly the dispensaries, and college clinics as well, should

refuse to treat any but the absolutely poor. He thought it was a terrible mistake, and one which would make the abuses greater than ever, to charge dispensary patients ten cents for prescriptions, as proposed by Dr. Sturgis. These institutions were established only for those who were not able to pay this amount, and this plan was scarcely less demoralizing to the public than that now in vogue in the out-door department of the New York Hospital. If this method were to prevail, the public would soon come to believe that ten cents was all that a physician's services were worth, and it seemed to him a serious question whether it would not be really better that all the dispensaries should be wiped out of existence.

After some further discussion it was unanimously resolved, on motion of Dr. Roosa, that it was the sense of the New York County Medical Society that the attending physicians and surgeons to the hospitals and dispensaries of this city should diligently inquire into the circumstances of all patients presenting themselves for treatment in them, and that they should refuse to treat those whom they had reason to suppose were able to pay a physician's fee.

EMMET'S PRINCIPLES AND PRACTICE OF GYNECOLOGY.¹

FROM the exceptional advantages which Dr. Emmet is known to have had for a quarter of a century in a hospital devoted exclusively to the diseases of women, together with a large private practice in the specialty, the profession have waited with justifiable impatience for the results here embodied, and we feel confident that these expectations will not be disappointed.

Though treating especially of the functional and surgical diseases peculiar to women, it is not wholly the book of a specialist; it is eminently the production of one familiar at least with general practice, and a book which no man in general practice should be without. The time happily has now passed when any physician or surgeon can afford to be ignorant of the ailments here described, — of the reflex or neurasthenic disorders radiating from that autogenetic zone of the female nervous system, the pelvis.

He who treats the heart or the liver, the stomach or the brain, in ignorance of the fact that the uterus and the ovaries are the *fons et origo* of the most intractable and distressing disorders; that they play a much larger part in woman's organization than the mere production of offspring, will soon find himself distanced by wiser and more far-sighted competitors. The only danger is that the success which has of late followed the treatment of female diseases should give the impression that it is owing to local applications alone, and thus tempt beginners, especially, to neglect of general and constitutional measures, without a competent knowledge of which no special practice can be as a rule satisfactory. This is a point which our author fully recognizes, and one the observance of which we may be sure is one of the prime factors of his acknowledged success. He says, "No man can prove successful as a gynecologist who has not mastered the principles of medicine, and stored up experience in the general treatment of disease."

¹ *The Principles and Practice of Gynecology*. By THOMAS ADAMS EMMET, M. D., Surgeon to the Woman's Hospital of the State of New York, etc. With one hundred and thirty illustrations. Philadelphia: Henry C. Lea, 1879.

The limited space which the JOURNAL can afford renders impossible any satisfactory digest of such a book. Every general practitioner will be well repaid for a careful perusal: the operator for its manifold practical suggestions: and the general practitioner for the knowledge which he will get of the protean forms which disease assumes in the female organization, which may all be due solely to local causes, and the treatment of which, if these causes be ignored, becomes merely empirical. Most of us are familiar with cases of metrorrhagia, dyspepsia, cardiac irregularities, neuralgia, and general nervous derangement, which, after being treated for years unsuccessfully by those who "disapprove of local treatment," are finally discovered to be dependent on functional or organic pelvic disorder, admitting of easy and prompt solution when properly diagnosed.

The book opens with a discussion of the influence of climate, education, and social conditions upon general development, and especially that of the female nervous system. Our author believes that the physique of women in this country is deteriorating, an opinion held in common with many others, but one in which we are unable to coincide. That an unhealthy development of the nervous system, due to the causes which he enumerates, is often manifest is unfortunately and undeniably true; but that on the whole the women of this country are physically better than fifty years ago is a belief which we think might easily be verified. Possibly the large experience of the author in the class of cases which he describes has unfavorably influenced his judgment. It has been a pleasure to feel that we are fast outgrowing the thin, skinny, nervous type formerly reckoned a national characteristic, and that the fuller type of fat and blood is becoming sufficiently common, owing to the more luxurious living incident to the increased wealth of the country. When the rage for co-education and education in unfeminine directions gets its inevitable check, and women receive a fuller and more physiological feminine culture, there is no reason to apprehend a greater nervous development than such as is unavoidably incident to our climate, and which is perhaps not undesirable as the foundation of the energy and "go-aheadativeness" of the American people in contrast with the more stolid, lymphatic temperament of our European neighbors. With this protest, however, we readily admit that the defects in physical training during the transition period of ten or twelve years in young women of the so-called higher classes are very great. Whether the capacity, in that special class, to produce large families is diminished thereby is somewhat doubtful. Is it not often a question of ethics rather than physiology? Is it not that women *will not*, rather than that they *cannot*?

The ensuing chapters on the principles of treatment, and especially that portion treating of the pelvic circulation, should be carefully considered as of elementary importance by every one who attends to his own uterine cases, all experience proving that success is closely dependent upon it. The articles on ovulation and menstruation are reinforced by, if not based upon, the analysis of nearly twenty-five hundred cases occurring in the author's own service. The question of the complete denudation of the mucous membrane, or its mere thickening, during each monthly period is merely glanced at, as not coming within the scope of the work; but we confess to disappointment that such a

large field of observation should not have afforded some elements towards the solution of this vexed question. The author's large experience in atresia of the vagina gives to his remarks original value, and the same also of treatment of retained menses from imperforate hymen. Unlike many high authorities, he contends for a free opening in cases of menstrual accumulation, with rapid evacuation and washing out of the uterine cavity.

To the ordinary practitioner perhaps no part of the book will be of more use than that relating to the ætiology and treatment of uterine displacements. He does not admit that anteversion *per se* is a malposition, it becoming so only when in addition the uterus is prolapsed. This is probably true, and accounts in a measure for the utter want of success in devising any effectual anteversion pessary which does not support the whole organ at its proper plane in the pelvis, — the restoration of the prolapse being all that can be accomplished by such means.

For the restoration of a retroversion he relies upon the finger alone. In many cases, doubtless, this — or, what is perhaps better, the “genu-pectoral position” — is quite sufficient, but the less experienced will often sadly miss our author's sleight of hand, and find the sound to accomplish the object more easily and effectually. Unfortunately, these are the very ones in whose hands the sound may become a two-edged sword, and we recommend to them first a trial of Dr. Campbell's method before resorting to an instrument which may leave the latter end of their patient in a worse state than they found it.

With regard to pessaries, we think he has struck the key-note in the following sentences: “It is not so much the position [of the uterus] which is to be corrected, as it is the removal of the obstruction to the circulation.” “When the instrument fits properly, and has corrected the prolapse, the patient will be unconscious of its presence.” And as to outside fixtures, “If there were no other objection, the fact that the patient has to be manipulating it constantly would be sufficient to condemn it, and no better plan can be devised for rendering a woman a confirmed invalid. His views upon flexures, the use of the stem pessary, and the operative measures of Simpson and Sims are worthy of careful attention, if only for their bearing upon dysmenorrhœa and sterility.

The author's method of restoring a completely lacerated perineum has now become tolerably well known, and is founded upon careful, long-continued study of the failures by the old method. It is difficult to see how one can fail to appreciate his way of catching up the straightened-out ends of the torn circular fibres and restoring them to their circular position, though any description is unsatisfactory until the process has been witnessed. We regret to see no allusion to the method devised by Dr. Jenks, of Detroit, for denuding the mucous surfaces, which for rapidity in execution, cleanliness, and freedom from hæmorrhage is a great advance upon the old methods. To the author, with his skillful and experienced manipulation, this denudation with hook or forceps, scissors or knife, is an easy matter, but he is writing for the use of those who are rarely gifted with his dexterity.

Inversion of the uterus, the comparative rarity of which may be estimated by West's statement that it was not once met with in a total of one hundred and forty thousand cases occurring in the Dublin Lying-In and the London

Maternity hospitals, has attracted much attention in this country of late years from the considerable number of cases reported. Dr. Emmet does not believe in the professional tradition that inversion is generally owing to undue traction on the cord. In this he agrees with Schroöder. It must be confessed, however, that West's statement is rather confirmatory of the old belief. The skill which governed the one hundred and forty thousand labors, presumably without any undue traction, it would seem, could have had no influence in preventing an occasional occurrence of the displacement in so large a number of deliveries, if irregular muscular contractions and atrophy from fatty degeneration be, as supposed by Schroöder, the chief cause of inversion. On the other hand, that traction is a less common factor than has hitherto been supposed may well be admitted in view of the force that is often used with impunity both by traction and by expression from above the pubis, and that such forces only become dangerous in an organ diseased or atrophied in certain parts.

The importance and difficulty of the diagnosis are strongly emphasized by the statement of instances which have occurred in New York, "where the mistake has been made of removing the whole organ for supposed polypus, and he gives two instances in which he was himself nearly led into a similar error. A good *résumé* of the various methods of reduction, with the principles involved, is within a compass which admits of easy reference by any one who may meet with such a case.

The subject of lacerations of the cervix uteri may be fairly said to be original with Dr. Emmet. The great frequency of the lesion, its causes, its effects, especially in relation to neuralgia, epithelioma, and hypertrophy, so called, and its surgical treatment were neither known, nor hardly suspected, until demonstrated by him; and though received with great incredulity at first, it has now become well recognized, and the operation as well established as any other in surgery. Its importance in a medico-legal point of view, in reference to abortion, the use of the forceps, etc., is evident to all. He believes that the intelligent "recognition of this lesion under its different forms" will afford to the observer "a new explanation of all his cases of elongated or hypertrophied cervix," and therefore that cauterization or ablation, except for malignant disease, is malpractice. Cases of apparently elongated cervix, found in the virgin uterus, are, in his opinion, really due to atrophy and prolapsus of the whole organ, the deformity disappearing when examined in the knee-elbow position, the uterus shutting up and "falling together as would an old worn-out spy-glass if held upright." Should this view prove to be correct, we shall hear less hereafter of the electro-cautery and resulting stenosis of the os.

In discussing vesico-vaginal fistula he pays a just and generous tribute to one from whom in many things he has been compelled to differ. He says, "From Dr. Sims's hand the operation [for closure of the opening] was accepted by the profession; it was immediately put into successful practice, and to the present day it has not been materially modified for the better, either in its principles or in its mode of execution." To the obstetrician this chapter is perhaps of more practical importance than any of which the book treats. The possibility of spontaneous closure of many of these injuries under the use of

hot-water injections shows the urgent necessity of their early recognition before such changes have occurred in the tissues as may render anything short of operative interference nugatory. He controverts the common idea that the opening is due to instrumental interference, asserting, on the contrary, that it is owing to neglect of the catheter, and to delayed delivery, for which the forceps should have been sooner applied. As the result of the experience of one who has operated for fistulæ into bladder or rectum on considerably over two hundred cases, the following sentences deserve attention: "I do not hesitate to make the statement that I have never met with a case of vesico-vaginal fistula which, without doubt, could be shown to have resulted from instrumental delivery." "I have claimed that any one who is familiar with the mechanism of labor, although wanting in practical experience, would do less damage in applying the forceps in such a case than would result if the delivery were left unaided." "While it may be true that instruments are often resorted to without urgent necessity, we must not ignore the consequence of allowing labor to be protracted. Vesico-vaginal fistula cannot occur as the consequence of a slough if delivery is always brought about as soon as the head fails to recede after each pain."

With the exception of the subjects of cystitis and cystotomy, for which, as is well known, the author has done so much, but for which we have no space, the remainder of the volume is devoted to diseases of the ovaries. We could have wished for something more encouraging as to the treatment of those cases of irritable and neuralgic ovary which are now the opprobrium of the profession, — cases in which one resorts, in a sort of blind despair, to every possible and impossible mode of relief; in which the "fat-and-blood" treatment, now so popular, proves too often a delusion, even the removal of both ovaries *à la* Battey being not always a success; and we are forced to the conclusion that it is indeed "difficult to afford any marked relief during the menstrual life of the woman." The ovariologist will peruse with interest the chapters devoted to that subject, which give, besides the valuable experience of the author, a concise view of diagnosis and the various operative procedures of the best recognized authorities.

The above is but a meagre summary of the important points, the valuable practical suggestions, with which the book abounds. Many of the subjects, as cellulitis, hæmatocele, uterine fibroids, etc., we have not even alluded to. Every practitioner should own the book, and we can promise that he will find embodied in it an experience which will be of daily service to him.

The statistical tables so freely interspersed are made to bear so directly upon the text as to lose for the reader much of their usual dry aspect.

The illustrations, between eight and nine hundred in number, are almost exclusively from original sketches of the author. It would seem almost hypercritical to notice the defects in style in a work of such magnitude, written amidst the cares and pressure of extensive professional duties. Such as they are they will doubtless receive correction in subsequent editions.

G. H. L.

GODLEE'S ATLAS OF ANATOMY.¹

THIS work consists of a series of plates to be issued at intervals, each fasciculus being accompanied with an installment of description and comment. The plates will form a large folio volume, the text one in octavo. Part First is before us. The four plates which it contains are devoted to the anatomy of the neck, and deserve the highest praise, both for the judgment and skill shown in the dissections, and for the beauty with which they are represented. Our only criticism is that some of the numerals and letters indicating the parts are not sufficiently clear. In the text the plates are described, and there are many practical surgical remarks which are of much value. The author shows himself better read in recent German anatomical literature than most English teachers of this branch appear to be. We hope in future numbers to see sections as well as dissections, for the work is so good that we shall be disappointed if it is not brought up to the latest requirements.

T. D.

GEGENBAUER'S COMPARATIVE ANATOMY.²

BOTH teachers and students of comparative anatomy will be glad to find a translation of this valuable manual. It is made from the second German edition (that of 1877), which has several advantages over the first. The few remarks we shall make apply solely to the section on vertebrate animals. We are often inclined to regret the absence of more details, especially with regard to man and the higher apes, but on reflection we see that they do not fall within the plan of the work, which is to give a strong outline of the subject, leaving the details to the knowledge of the teacher and to the private research of the student. Gegenbauer's work is characterized by clearness and good sense. As an instance of the latter, especially, we would quote from his remarks on the foot of mammals: "In addition to its primitive function as an organ of support and of movement, the foot may be developed into a grasping organ; when this happens the foot comes to resemble in many points the end of the fore limb or hand. But in all essential points of structure it is still a foot so long as we hold to the anatomical conception of what hand and foot are, and do not put functional relations into the foreground; and if we do, then the proboscis of the elephant is a 'hand' also." Our author's opinions on the vertebral theory of the skull strike us as very valuable. The crude notions of the older transcendental anatomists that the segments of the skull are modified vertebrae may be considered exploded. On the other hand, there is no doubt that the notochord does extend into the base of the skull, and we must admit a strong resemblance between the branchial and the visceral arches.

¹ *An Atlas of Human Anatomy*. Illustrating most of the Ordinary Dissections and many not usually practiced by the Student, with an Explanatory Text. By RICHMAN JOHN GODLEE, M. S., F. R. C. S. Philadelphia: Lindsay and Blakiston. 1878.

² *Lectures of Comparative Anatomy*. By CARL GEGENBAUER. Translated by F. JEDERNEY HELL, B. A. The translation revised and a preface written by E. RAY LANKESTER, M. A., F. R. S. London: Macmillan & Co. 1878.

When we remember that the permanent vertebrae are the results of a secondary segmentation, there is little difficulty in believing that a portion of the skull, corresponding in extent to the cranial end of the notochord, is formed by the fusion of a number of vertebral elements; but in front of this there is another portion of a different, or at least secondary, origin, and it is pretty evident that segments of the skull do not correspond individually to vertebrae. Information is also gained from the nerves, as those which arise in front of the notochord have no resemblance to spinal nerves. Gegenbauer believes that at least nine vertebrae enter into the composition of the cranium.

The work is well translated and printed.

T. D.

THE AMERICAN OPHTHALMOLOGICAL SOCIETY.

THIS volume, although it contains papers of undoubted clinical value, is not satisfactory as a product of three years' activity of the society. The chief causes of its unsatisfactory nature are the relatively small amount of evidence of independent observation, and the apparent neglect of the greater clinical questions that now interest the ophthalmological world; there is, besides, a certain flavor of "specialism" in some of the papers, which to the surgeon lack almost everything but this flavor. It will be a bad day for "specialties" when it becomes a custom to cover under their veil work which will not bear the light that illumines the science of surgery.

Dr. Bull furnishes careful studies of certain syphilitic diseases of the lid and conjunctiva, and of amyloid infiltration of the lid and orbit, which, like all of Dr. Bull's recent contributions to the pathology of these parts, are valuable additions to ophthalmological literature. Drs. Wadsworth and Putnam give a condensed account of an interesting physiological study of the intra-ocular circulation, and Dr. William Thomson describes an ingenious new ametrometer, based upon the principle of measuring the circles of diffusion formed around the image of a small flame upon the retina of an ametropic eye. Several of the other papers are clearly recorded, and interesting clinical contributions, especially those of Drs. Strawbridge, Dixon, Webster, and Vermeyne. A plain, unvarnished account of some of the weaker papers would no doubt be of great benefit to ophthalmological literature, but it would be rather too delicate a task to attempt it in a journal devoted to the general literature of the profession.

D. H.

DA COSTA ON HARVEY.

THIS little book is a very prettily written essay, which we cannot decry, though we do not quite agree with the author. It may be that Harvey deserves to be called the discoverer of the circulation. He was the first to write a book on it alone. He probably was the first to appreciate the full importance of the question. He described and demonstrated it with rare skill;

1. *First published by the American Ophthalmological Society, 1876, 1877, 1878.*

2. *Translated by Devereux. By J. M. Da Costa, M. D. Philadelphia: J. B. Lippincott & Co. 1879.*

but we cannot shut our eyes to the merits of his predecessors. When Harvey went to study in Padua the idea was not new, either in Italy or Spain, though its full bearings had not been grasped. We may claim for him the honor of having made the discovery a fact instead of a theory.

MARSH ON SECTION CUTTING.¹

We should like to speak kindly of this little work, for the author, no doubt, meant to do a service to beginners. The trouble is, however, that though Rutherford and Schaefer may have left some gaps in their admirable handbooks, this book does not fill them. It has one or two little points that are perhaps new, but it does not give information on many subjects which a book of its title should. To be of any real use it should teach more than it does. Still it is not without merit. In his preface the author calls his book a "manualette," and though the word is new to us, it seems, somehow, very descriptive of the nature of the work.

NATIONAL HEALTH LEGISLATION.

DURING the present session of Congress no public health legislation has been enacted, but a bill has been reported by the committee on epidemic diseases, which it is understood has been prepared by the National Board of Health at the request of the committee, and is so comprehensive in its character, and shows such proper consideration for the conflicting interests necessarily involved in any scheme for national health legislation, that it is to be hoped the bill will receive proper consideration and action before the present session is terminated. By the terms of the bill the National Board of Health are required to frame sanitary rules and regulations under which vessels coming from ports where infectious disease prevails may enter ports of the United States. The regulations are to provide for the careful inspection and sanitation of vessels at foreign ports before departure for the United States by medical officers detailed from the army, navy, or marine hospital service, one of whom may be stationed at any of the foreign ports where infectious diseases prevail; and on the arrival of such vessels at United States ports the local health authorities are required to demand the certificate of the medical officer at the port of departure that the sanitary regulations prescribed have been complied with, and to subject the vessel to such sanitary measures at the port of entry as may be directed by the National Board of Health. In the event of their failure or neglect to do so the board may request the president to detail a medical officer of the public services for the execution of this duty.

On the outbreak of cholera, yellow fever, or other infectious disease within the United States, the board is empowered to take such measures as will prevent the spread of the diseases from one State to another, by establishing stations, and by the erection of temporary buildings on the lines of railroad or river

¹ *Section Cutting. A Practical Guide to the Preparation and Mounting of Sections for the Microscope.* By DR. SYLVESTER MARSH. Philadelphia: Lindsay and Blakiston. 1879.

traffic between States, for the disinfection of persons, baggage, vessels, or other vehicles of contagion, and may enforce such rules and regulations as have been prescribed therefor.

All consular officers of the United States are required to make weekly reports of the sanitary conditions of the points at which they are stationed to the board of health, who are to obtain as far as possible, by the voluntary coöperation of local health authorities, all accessible information bearing on the state of the public health of places within the United States, and to transmit weekly reports of the same to local health officers and other proper authorities.

The board are directed to cause investigations to be made into the diseases prevailing among domestic animals, especially those used for food, and to ascertain the best means for preventing and controlling such diseases. The board are also required to cause a thorough inspection of all animals arriving at the shipping ports of the country, and to make such notification and recommendation in regard to the prevalence of disease among such animals as may be deemed proper. These last provisions of the bill have been conceived in an eminently wise and scientific spirit, as the prevalence of disease among certain domestic animals is becoming a matter of vital importance to some of the most important interests of the country; and the required investigations may be much better conducted under the direction of the National Board of Health, composed as it is of men eminent for their professional and scientific attainments, than under the unprofessional departments of the government to which they have heretofore been entrusted. It should be borne in mind, too, that such investigations should be pursued in the highest scientific spirit of inquiry, with the view of adding to our knowledge of comparative pathology; this field has been but little worked, but is one from which most valuable information may be gathered in regard to the essential principles governing contagious affections, and the manner in which disease is communicated from one individual to another. The proposed detail of medical officers of the public services for executing the laws and regulations that may be made under the act is a wise provision, as there can be little question that these duties would be better discharged by these officers than by those appointed under the influences that too often determine the selection of the officials entrusted with the care of the public health.

The bill provides for the appropriation of six hundred and fifty thousand dollars for carrying out its provisions.

CROUP AND DIPHTHERIA.

THE growing belief in the identity of croup and diphtheria lends interest to the discussion now in progress before the Royal Medical and Chirurgical Society of London on the report of the committee appointed some years ago to investigate the doubtful points regarding these affections, chiefly as to "whether there is such a disease as 'idiopathic membranous croup;' that is, whether membranous laryngitis exists independently of the diphtheritic poison." In the absence of clinical and pathological facts which are conclusive to all minds,

these questions can be decided only by the prevailing opinion of the medical world expressed through such bodies as the Medical and Chirurgical Society. The deductions of the committee, printed on another page, seem to have been drawn with a view to making their report unanimous, and, although doubtless as positive as the circumstances would admit, they were not sufficiently explicit to enable the members of the society to agree as to their exact meaning; hence the interpretations were conflicting. Many of the members were quite satisfied, from their own experience, that the diphtheritic poison was not the sole cause of membranous croup, but that various zymotic and non-septic influences might be held responsible. Dr. Wilson Fox referred to the casts of the bronchial tubes in plastic bronchitis as being analogous in structure to the croupous membrane, and as indicating the possibility of non-specific membranous disease. If the burden of proof rests upon those who wish to show that all cases of membranous croup are laryngeal or tracheal diphtheria, it is not probable that more dogmatic conclusions than those of the committee can at present be sustained; but of this we may be certain with regard to our own community, that of late years, since diphtheria has been prevalent, idiopathic membranous croup is a disease seldom heard of, and, in a family of children, no physician would now be justified in considering a case of primary membranous laryngitis as non-diphtheritic unless diphtheria could be positively excluded. Perhaps that is as far as it is worth while to go, since it is not likely that the discussion before the Medical and Chirurgical Society, which may be a prolonged one, will convince the many competent observers, especially those of an older generation, who have "had cases," that non-specific membranous croup is entirely a delusion of the past.



A MORAL DISEASE AND ITS CURE.

THE terrible crime committed last week in Pocasset, an Adventist "making a sacrifice unto the Lord," by stabbing through the heart his sleeping daughter, five years of age, and being fully sustained in the deed by the brethren of his creed, is a startling reminder of the powerful influences which are quietly at work in this little State, and is in our opinion the legitimate result of the teachings of certain influential men who by precept and example educate the masses to espouse any cause or belief which has the flavor of novelty or opposition in it. We were once assured by a colleague of his conviction that it was the mission of this community of ours to try all sorts of social or political experiments. It may be a harmless matter for the "sages" and "advanced thinkers" to dabble in them, but the spirit thus engendered will crop out in less tutored minds in the shape of some hideous form of fanaticism, such as lately has been witnessed. We trust there will be no talk about non-responsibility in this case. Whatever may be the precise condition of the murderer's mind from a nicely calculated scientific stand-point, or of the minds of the men, women, and children who uphold him in his crime, we feel sure that the moral atmosphere of this befogged community would be wonderfully cleared by a prompt infliction of the full penalty of the law.

MEDICAL NOTES.

— We are glad to learn that Dr. H. L. Bowditch is recovering from his recent injury, and is able partially to resume practice. In alighting from a horse-car some eight weeks since he fell, and it was found that the tendon of the quadriceps extensor muscle had been ruptured. Although seventy years of age he has sustained the accident without perceptible impairment of his general health. He has of course been prevented from attending the meetings of the new National Board of Health, but we understand that the members have had the benefit of his counsel and advice. Dr. Bowditch's reputation and popularity are so wide spread that the profession not only of Boston but of the whole country will be rejoiced to hear of his recovery. Dr. Knight, his partner, is slowly convalescing from a severe attack of rheumatic fever.

— The Rhode Island Board of Health was established to make investigations and reports with regard to the causes and prevention of disease, to perform the duties of cattle commissioners, to collect and report upon the vital statistics of the State, and to diffuse useful information among the people. It consists of six members, of whom four are physicians. The first report of the board is just published, consisting of articles on hygiene in public schools; dangers from wall-papers, poisonous cards and labels; prevention of kerosene accidents; kerosene; medical topography of Rhode Island; diphtheria; causes of ill health among women; dietetic value of alcoholic beverages; and the report of the secretary, — beside reprints of the Michigan circular on resuscitation of the apparently drowned, and Colonel Waring's excellent prize essay on typhoid fever. The report does not reach the standard of the best sanitary science in that State, while some parts of it, notably the instructions with regard to infectious diseases and *treatment* of diphtheria, are open to criticism. The board evidently has entered upon its duties with zeal and with hopes of a wide work and much usefulness.

— We are informed by the committee of arrangements for the annual meeting of the Massachusetts Medical Society on the 10th and 11th of June that surgical instrument makers and druggists desiring to exhibit their goods can do so only by first obtaining authority in writing from a sub-committee consisting of Dr. Amory, of Longwood, and Dr. J. O. Green, Jr., of Boston, of the committee of arrangements; and that under no circumstances will the society be responsible for any expense incurred by such exhibition. Applications must be received before June 1st.

— Dr. A. P. Beach, of Seville, Ohio, reports the birth of a child of the well-known giants, Mr. and Mrs. Bates. The father's stature is seven feet seven inches; the mother's, seven feet nine inches. At birth the child weighed twenty-three and three fourths pounds; its height was thirty inches; breast measure, twenty-four inches; breech, twenty-seven inches; head, nineteen inches; foot, five and one half inches in length. The secundines weighed ten pounds. The amniotic fluid amounted to six gallons. This is the largest child at birth of which there is any record.

NEW YORK.

— At the last regular monthly meeting of the County Medical Society, April 28th, Dr. D. H. Goodwillie read a paper on Extirpation of the Bones of

the Nose and Mouth by the Use of the Surgical Engine, after which Dr. George B. Fowler presented one on Intra-Vascular Alimentation: the Nutritive Value of Peptones. Dr. Fowler has recently been making some original investigations in regard to the use of digested meat as an aliment, and his experiments in this direction upon the lower animals have proved so successful that he has been led to the conclusion that peptone is much preferable to either blood or milk as an agent for intravenous injection. He furthermore reports that the results of his researches have been confirmed in a very satisfactory manner in one case in which it was employed in this manner in the human subject.

— At a recent meeting of the Academy of Medicine Dr. Abram Dubois was elected an honorary Fellow of the Academy, in consequence of his having contributed five thousand dollars towards the enlargement of its building, as well as other generous donations to the institution. At the last meeting, May 1st, Prof. Frank H. Hamilton read a paper on Posture as a Means of Relief in Strangulated and Incarcerated Hernia, in which he advocated placing the patient upon a steep inclined plane, with the head inverted, and gave a detailed explanation of the mechanism of reduction.

— The bill providing for changing the State Inebriate Asylum at Binghamton into an asylum for the chronic insane (supplementary to the Willard Asylum), to which allusion was made in the recent article on the New York State Charities Aid Association, published in the JOURNAL, has now passed both houses of the legislature, and will doubtless soon receive the signature of the governor.

— Mr. Palmer, the manager of the Union Square Theatre, has given the entire receipts of a matinée performance to the New York Foundling Asylum, no deduction being made for expenses. It was peculiarly appropriate that a representation of the beautiful play, *Lost Children*, now running at this theatre, should be given in aid of such a charity, since one of the principal characters in it is Vincent de Paul, the founder of the first foundling asylum, and two or three of the scenes are laid in this asylum in Paris.

— Two cases of death from hydrophobia are reported from Brooklyn.

CHICAGO.

— Prof. E. W. Jenks, who has occupied the chair of gynecology in the Detroit Medical College since the organization of that school, has been elected to the place made vacant in the Chicago Medical College by the resignation of Professor Byford. — Prof. Daniel T. Nelson has resigned the chair of physiology in the Chicago School. His successor is not yet appointed.

— The management of the Cook County Hospital is just now receiving an overhauling at the hands of a committee of the board of commissioners, led by Commissioner Fitzgerald, who thinks the warden needs disciplining. The trial does not affect the medical board. It seems to have grown chiefly out of the scandal of an interne, a nurse, and the apothecary surreptitiously using the wash-room and dead-house of the hospital in which to clean the flesh from the bones of bodies they had procured for skeletons. The testimony differs as to whether the warden had given permission for these proceedings and for the use of the bodies of deceased patients.

BOSTON CITY HOSPITAL.

SURGICAL CASES OF DR. GEO. W. GAY.

Popliteal Aneurism; Femoral Artery tied with Catgut Ligature; Relieved.

— T. L., laborer, aged forty-six years, entered the hospital September 26, 1878, and gave the following history: Three months ago he first felt a pain in the right popliteal space; a month later he noticed a tumor there of the size of a walnut, which has increased rapidly since that time. The heart is normal, and he has received no injury, although he appears to have been more or less dissipated. He is a large, powerful man, and has generally had good health. The right popliteal space was filled with a firm, elastic, pulsating tumor, which extended from the outer hamstring around on to the inner aspect of the thigh ten and a half inches. The vertical diameter was five and a half inches. The circumference of the right knee was two and three fourths inches greater than that of the left. The thrill and bruit were well marked, and the pain at times was excruciating. The patient was put to bed for a week, to get him accustomed to the confinement before any operation should be undertaken. Large doses of opium were required to procure relief from pain.

October 4th. The circumference of the right knee had increased two inches, and the skin over the aneurism was beginning to look red and irritable. It was now time to consider the different methods of treatment. The tumor not being confined to the popliteal space, flexion could do no good. The patient was too irritable to bear compression of the femoral artery, had it been practicable to employ it. The case did not appear to be a suitable one for any other method of treatment but the Hunterian operation, and that was accordingly done. The patient was etherized, and the femoral artery was tied four inches below Poupart's ligament with a double catgut ligature cut short. The wound was closed with sutures, and dressed with compound tincture of benzoin. The circumference of the right limb at the knee was one inch less after the operation than before it.

October 7th. Patient has been very comfortable, with the exception of a chill last night. Sutures removed. Wound closed by first intention throughout its whole extent. The ligature was never seen after the operation.

October 30th. There has been more or less pain in the right foot since the operation, but it could be readily controlled by opiates. The foot has been warm, and although the wrappings have been seldom disturbed there has been very little, if any, swelling. No signs of gangrene. The circumference of the knee is two inches less than at the time of the operation. The tumor was firmly bandaged. Ordered blisters and poultices.

November 30th. The tumor has diminished considerably since the last report, so that now, although the patient has been walking about for a week, the right knee is only about an inch and a half larger than the left, whereas it was four inches larger prior to the operation. The tumor is now soft, painless, and devoid of pulsation. Although much smaller since the operation, yet it has never shown any tendency to become firm and hard, as is usually to be expected in these cases. This result may take place in the future should a complete recovery be obtained. There is pulsation in the right femoral, one

inch below Poupart's ligament, and also in the anterior and posterior tibials. The foot is warm, free from swelling, and the pain not severe enough to require opiates. The great size of the aneurism, its rapid growth, and the happy results following the use of the catgut ligature are points worthy of notice. It is hardly possible to get a wound with ligatures hanging from it to unite by first intention. In many operations primary union would be obtained were it not for the silk with which the vessels are secured. Torsion in these cases is tedious and uncertain. But good catgut, carefully tied by three square knots, and the ends cut short, allows the wound to be closed throughout its whole extent. This material has been in use over two years in this hospital, and thus far it has always been satisfactory.

Wound of External Iliac Vein; Ligature; Death.—Mr. N., aged sixty-four years, was stabbed in the right groin with a common pocket-knife. He bled until he fainted, and on reaching the hospital was in a state of collapse; almost pulseless, surface and extremities cold and clammy, face pallid, and respiration slow and sighing. On applying warmth and giving stimulants reaction came on to a moderate degree. The hæmorrhage being controlled with two fingers thrust deep into the wound, the latter was enlarged two inches, and after much trouble, owing to the depth of the vessels and the profuse hæmorrhage when the pressure was relaxed, the vein was secured by ligatures above and below the opening. The knife had passed upwards and backwards beneath Poupart's ligament, and made a lacerated wound an inch long in the external iliac vein. A smaller vein was afterwards tied, and no more bleeding took place. But the patient never rallied beyond that stage of great restlessness which John Bell says is an almost infallible sign of death, and died the next day, about thirty hours after entering the hospital.

LETTER FROM LONDON.

The Care of the Insane in Great Britain. — Lunacy Laws.

MR. EDITOR,—One of the results of the free communication between nations which is so striking a feature of the present age is that social reforms are instituted almost simultaneously in several different countries. In my last two letters I dwelt upon the English contribution toward the solution of a problem which, after having lain dormant for centuries, is being closely and practically studied in many countries at the present time, namely, the disposal of sewage. In my present letter I intend to deal with another subject which is claiming the attention of reformers on both sides of the Atlantic; I refer to the question of insanity in its legal and medical aspects. For a good many years the public in England, as a whole, and the profession had alike remained quiet in the belief that matters were pretty satisfactory as touching the guardianship of insane persons; but signs have not been wanting during the past three or four years that public confidence was becoming shaken, and this feeling of uncertainty has been growing so rapidly of late that the government, after issuing a royal commission to collect evidence and report upon the subject, is about to take steps to alter the existing state of things.

The question of legislation for the insane is one of comparatively recent origin, for the first legislative enactment for the protection of lunatics does not date further back than the year 1744. Up to that time their treatment had been of the most barbarous description. The present Earl of Shaftesbury, in introducing a bill to amend the lunacy laws in 1845, said in his speech, "the whole history of the world until the era of the Reformation does not afford an instance of a single receptacle assigned to the protection and care of these unhappy sufferers, whose malady was looked upon as hardly within the reach of medical aid. If dangerous, they were incarcerated in the common prison; if of a certain rank of society, they were shut up in their houses under the care of appropriate guardians: chains, whips, darkness, and solitude were the approved and only remedies." At the time of the Reformation, however, Henry VIII., in abolishing monasteries, seized upon one which had been founded in the thirteenth century, in the city of London, and presented it to the city, with all its revenues, as a residence for lunatics. The prior of this monastery had been directed by its founder to receive and entertain the Bishop of St. Mary of Bethlehem and all belonging to that order whenever they should be in England. The name Old Bethlehem became attached to the monastery; it clung afterwards to the asylum; in its abbreviated form, Bethlem, or Bedlam, it is still applied to this celebrated hospital, and has passed into a household word in all English-speaking communities. It is doubtful whether the condition of the unfortunate lunatics was much improved by this new foundation; for, more than a century afterwards, we find that it was necessary to pass a rule to the effect that "no keeper or servant in Bethlehem Hospital should beat or ill treat a lunatic without he considered it absolutely necessary for the better governing of the lunatic." The statute of 1744, to which I have referred as the earliest act of Parliament in which the social treatment of insane persons is dealt with, provided that two justices of the peace could issue a warrant for the arrest of any person who was furiously mad, or so far mentally disordered as to be dangerous if left at large. The lunatic was to be locked up in a secure place, and, if necessary, chained. The way in which at this time the inmates of lunatic asylums were treated is depicted with horrible realism in Hogarth's celebrated picture. In 1763 a committee was appointed by the House of Commons to inquire into the condition of the insane, and it was proved beyond all possibility of doubt that numerous persons who were perfectly sane were enticed away from home by relatives under false pretenses and placed in asylums. It was ascertained that in one asylum the great majority of the inmates were persons of this kind; no medical man ever visited the asylum, and the inmates received no medical treatment. As the result of this investigation the first lunacy act was passed in 1773, by which a great reformation was effected, and the foundation was laid for our present enactments. By this act a board of five commissioners was appointed, who should be Fellows of the College of Physicians. No one might receive into his house more than one lunatic without a license from these commissioners, and they were to have the power of visiting all places where lunatics were detained at any time, each commissioner being bound over by oath not to reveal to the proprietor of an asylum the date of a proposed visit. This act remained in

force without further inquiry until 1813, when the attention of the House of Commons was again called to the unsatisfactory state of everything which had to do with the treatment of lunatics. It was proved beyond question that many sane persons were still incarcerated in asylums; and it was found that in one of the licensed mad-houses the patients were confined in cells on the ground-floor nine feet long, the ground wet, the only furniture consisting of a box which contained straw to be used as a bed. A select committee was appointed to investigate the whole matter, and their report contained frightful accounts of the way in which these establishments were carried on. So strong, however, was the influence which was brought to bear upon members of the legislature by those who were interested in maintaining the *status quo* that it was not till 1828 that any measure could be carried through Parliament to amend the law which had permitted such gross abuse. Up to this time any person could be committed to an asylum on the certificate of one physician, surgeon, or apothecary, under the latter term being included all who dealt in drugs, whether they had obtained a diploma or not. By the new act every certificate was to be signed by two medical men, who had separately to visit and examine the patient, and to state that he was a fit person to be confined in an asylum. Neither of these medical men was to be in any way connected with the asylum to which the patient was to be sent. The number of commissioners was raised to fifteen; their appointment was taken out of the hands of the College of Physicians and placed in those of the government. Each asylum was to be visited four times a year by a committee consisting of three commissioners. Whenever a new patient was admitted into an asylum notice had to be sent to the commissioners within seven days, and there were special regulations as to the frequent visitation of all lunatics by medical men. The commissioners were, moreover, given full power to revoke or refuse any license they might think proper, or to order the liberation of any person from an asylum.

It is a strange comment upon the state of public opinion in the early part of this century that one of the most prominent movers in the introduction of these most necessary regulations was the present Earl of Shaftesbury, then Lord Ashley. Were it not a matter of history it would be almost incredible that such a horrible system as before existed could have been allowed to remain unaltered until so recent a date that one who is still among our foremost social reformers was able to take an important part in its abolition. Under the new law the condition of the insane was much improved; but so deeply rooted was the system which it was designed to abolish that for many years complaints of ill treatment and wrongful detention made themselves heard. At length, in 1844, the commissioners themselves drew attention to the mismanagement and ill treatment of patients, which were still unhappily only too common, and which they felt themselves powerless to prevent; and as a consequence of their representations Lord Ashley again took the matter up, and passed through Parliament the celebrated act of 1845, which has been in force with the exception of slight amendments, ever since.

The system which was inaugurated under the act of 1845 may be briefly described as follows: Any registered medical practitioner is qualified by law to sign a certificate of lunacy. In the case of all patients who are not paupers,

each such certificate must be signed by not less than two registered practitioners; in the case of paupers the signature of one practitioner is sufficient. In the former class neither of the certifying doctors must have any connection, direct or indirect, with the asylum or house to which the patient is to be consigned, nor must there be any near relationship between either of them and the owner of the asylum. They must not be in partnership, nor must one of them be the paid assistant of the other. Each of them must examine the patient for himself, apart from the other; and each must note facts indicating insanity which he separately has observed for himself. Facts communicated to them by the friends of the patient as having occurred in their absence may be mentioned as additional evidence, but such communicated statements are not in themselves sufficient to render a certificate valid. In addition to these two medical certificates an order must be obtained from one of the friends of the patient, or from some one acting on their behalf, authorizing the establishment of control over the patient, and the person signing this order renders himself liable for all expenses incurred in connection with the treatment.

Having thus been duly certified, the patient either may be placed in an asylum, or he may be admitted into the private family of a medical man, or of any one else who may undertake the duty. No private family is allowed to take more than one such patient at a time without a special license. With one exception, which I will presently mention, the whole machinery for certifying and for treating lunatics is placed under the control of the Commissioners of Lunacy. There are now six acting commissioners, who are obliged to devote the whole of their time to the work, each receiving £1500 a year for his services, three of them being medical men and three barristers. In addition, there are five honorary commissioners, who are unpaid, and take no part in the detailed work of the office. The commissioners are appointed by the lord chancellor, and are responsible to him for the proper performance of their duties. It would be impossible for so small a body of men to carry on the whole of the routine work connected with the proper supervision of the sixty thousand lunatics who are under control in England and Wales, and consequently the commissioners are empowered to depute a part of their work and authority to others who are directly responsible to them. These *visitors*, as they are called, are chosen by the justices in quarter sessions from among themselves, one or more medical men in each district being appointed to help them in the more technical part of their duties. The commissioners themselves, however, perform all the duties for the metropolis and the districts immediately round it.

Every asylum must be licensed by the commissioners, or by the magistrates acting for them, and each asylum must be visited not less than six times each year, the visits being made without warning and at irregular intervals. At these inspections the books and reports kept by the superintendent are carefully inspected, and the state of the asylum inquired into; the patients also may be examined by the commissioners, whose duty it is to leave no nook or corner of the place unexplored. There is a special clause in the act authorizing the commissioners to pay night visits to asylums whenever they like. The commissioners have a similar right to pay visits whenever they like to patients who are confided to the care of private families.

A patient having been certified to be insane, he must be removed to an asylum or placed under control in a private family within seven days. Within twenty-four hours of his reception, the superintendent of the asylum or the head of the family must forward an exact copy of the certificates and order to the Commissioners of Lunacy. Provision must also be made for proper medical care. Every asylum licensed for more than one hundred patients not having a medical man as proprietor must have a resident medical officer. If the license be for more than fifty but less than a hundred patients, a medical man must visit it at least once a day; and for any number less than fifty patients there must be a medical visit at least twice a week. In the case of single patients a medical attendant must be appointed, who shall pay a visit not less often than once a fortnight. Neither of the doctors who signed the certificates is allowed to perform this duty.

The patient having been received and copies of the certificates duly forwarded, the medical man under whose care he is placed, whether in an asylum or in a family, must make a separate examination for himself, and he must within seven days forward a report to the commissioners embodying the results of this examination. From that time a journal relating to each case must be kept, which must be filled up once a week if the patient be in an asylum, and at each fortnightly visit if he be in a family. In the former instance, the state of the patient must be noted, and any special points, such as the use of a strait-waistcoat, the use of force by any of the attendants to the patient, the occurrence of fits, etc., must be entered. In the latter instance the visiting medical man must note also what state the house was in, whether everything appeared clean and well kept, etc. This journal is inspected by the commissioners at their visit. A special report must also, in the case of private patients, be sent to the commissioners at the beginning of each new year.

I mentioned that there was one exception to the statement that all lunatics are under the control of the commissioners. In the case of patients who are possessed of property their friends may place them under the immediate charge of the lord chancellor. He deposes the management of the lunatic to some one person or more, and the management of his property to certain other persons, who are in both instances directly responsible to himself. He has his own staff of medical and legal visitors, whose functions are confined to visiting the chancery lunatics only. It is naturally a much more expensive proceeding to put a lunatic in this way directly into the charge of the court of chancery, and as a rule it is only done where the estate is a large one and the lunatic a person of some consideration. There are not more than two hundred such patients in the United Kingdom.

Such, then, is the present position of the lunacy question in England. Theoretically it ought to work perfectly, and to shut out the possibility of wrongful detention and ill treatment. As a matter of fact, there are complaints from all parties, — from the public, from the general profession, and to some extent from the specialist. I must, however, reserve the consideration of these complaints and the reforms which are advocated to meet them for another letter.

(To be concluded.)

SHORT COMMUNICATIONS.

DIPHTHERIA AND CROUP.

MR. EDITOR, — In the JOURNAL for March 27th, page 429, Report on Progress in the Theory and Practice of Medicine, I think Dr. Mason does not give a full and fair view of the doings of the Royal Medico-Chirurgical Society of London. This organization appointed a committee in November, 1875, and their report is in *The Lancet*, October 26, 1878, with the discussion on its reception by the society. The report is rather conservative, I will admit, and positive opinions upon any one point are not given in express language. But by the very strongest words of implication two points are made: First, that it is not a filth disease; second, that diphtheria and croup are identical. This is a long stride towards a correct and an easily understood theory regarding the false membranous disease. When the profession loses sight of the well-known clinical fact that filth, however introduced into the human system, causes diseases of the alimentary canal, groping in the dark must take place. Those who are not ready to admit this I will refer to Simon's little work, reprinted in this country under the auspices of the Massachusetts State Board of Health. If any one ever heard of filth finding its way out of the system by the way of the air-passages I would like to have the facts. At the last quarterly meeting of the Rhode Island Medical Society the subject of diphtheria was discussed (March 18th) but there was not a lip that its causation was filth. The reporter of the doings of our society for the December meeting informed the JOURNAL that I advanced "novel ideas." This is a mistake on his part, and had he taken notes of authorities to which I referred he would not have held such an opinion. It is a novelty to me to be told that filth induces a disease of the air-passages and not of the digestive organs.

JAMES O. WHITNEY.

PAWTUCKET, R. I.

[*The Lancet*, October 26, 1878, gives the following conclusions from the report mentioned: (1.) Membranous inflammation confined to, or chiefly affecting, the larynx and trachea may arise from a variety of causes, as follows: (a.) From the diphtheritic contagion. (b.) By means of foul water, or foul air, or other agents, such as are commonly concerned in the generation or transmission of zymotic disease (though whether as mere carriers of contagion cannot be determined). (c.) As an accompaniment of measles, scarlatina, or typhoid, being associated with these diseases, independently of any ascertainable exposure to the especial diphtheritic infection. (d.) It is stated, on apparently conclusive evidence, although the committee have not had an opportunity in any instance of examining the membrane in question, that membranous inflammation of the larynx and trachea may be produced by various accidental causes of irritation, — the inhalation of hot water or steam, the contact of acids, the presence of a foreign body in the larynx, and a cut throat. (2.) There is evidence in cases which have fallen under the observation of members of the committee, and are mentioned in the tables appended, that membranous affection of the larynx and trachea has shortly followed exposure to cold, but their knowledge of the individual cases is not sufficient to exclude the possible intervention or coexistence of other causes. The majority of cases of croupal symptoms definitely traceable to cold appear to be of the nature of laryngeal catarrh. (3.) Membranous inflammation, chiefly of the larynx and trachea, to which the term "membranous croup" would commonly be applied, may be imparted by an influence, epidemic or of other sort, which in other persons has produced pharyngeal diphtheria. (4.) And, conversely, a person suffering with the membranous affection, chiefly of the air-passages, such as would commonly be termed membranous croup, may communicate to another a membranous condition limited to the pharynx and tonsils, which will be commonly regarded as diphtheritic. It is thus seen that the membranous affection of the larynx may arise in connection with common inflammation, or with specific disorders of several kinds, the most common of which in this relation is that which produces similar change elsewhere, and is recognized as diphtheria. In the larger number of cases of membranous affection of the larynx the cause is obscure (that is, in any given case it is difficult to predicate the particular cause in that case). Among those in which it is apparent common irritation seldom presents itself as the source of the disease; accidental injury is but very infrequently productive of it. But few cases of undoubted origin from exposure to cold are on record. On the other hand,

in a very large number of cases infective or zymotic influence is to be traced. The membrane, even when chiefly laryngeal, is more often than not associated with some extent of a similar change in the pharynx or in the tonsils; and whether we have regard to the construction of the membrane, or to the constitutional state as evinced by the presence of albumen in the urine, it is not practicable to show an absolute line of demarkation (save what depends upon the position of the membrane) between the pharyngeal and laryngeal forms of the disease. The facts before the committee only warrant them in the view that when it obviously occurs from a zymotic cause of distinct infection, and primarily affects the pharynx, constitutional depression is more marked, and albuminuria is more often and more largely present, though in both conditions some albumen in the urine is more frequently present than absent. The most marked division indicated by the facts before the committee is that between membranous and non-membranous laryngitis. The committee suggest that the term "croup" be henceforth used wholly as a clinical definition, implying laryngeal obstruction occurring with febrile symptoms in children. Their croup may be membranous or not membranous, due to diphtheria or not so. The term "diphtheria" is the anatomical definition of a zymotic disease, which may or may not be attended with croup. The committee propose that the term "membranous laryngitis" should be employed, for the avoidance of confusion, whenever the knowledge of the case is such as to allow of its application.

(Signed): W. Howship Dickinson, Chairman, C. Hilton Fagge, Samuel Gee, G. F. Payne, H. G. Howse, R. H. Semple, W. S. Greenfield, Secretary. — EDITOR.]

DR. SAMUEL HOWE.

It is with feelings of great sorrow that it becomes our duty to record the death of Dr. Samuel Howe, which occurred on the last day of April. Dr. Howe, though young in years and in the practice of his profession, had demonstrated that his long term of study had borne good fruit. He was not only well versed in the science of medicine in general, but he was peculiarly fitted for the specialty which he had chosen, and outside of the strict limits of his professional study there were few, if any, among his brother practitioners whose knowledge of topics embraced in general literary culture covered so wide a range. Equally at home in modern history, his knowledge included these subjects in both their general and constitutional aspects; while his familiarity with the subjects of natural history and comparative anatomy was a matter of surprise to those who knew how closely he had applied himself to the study of his profession. His knowledge was equalled by his modesty in asserting it. A genial companion and generous almost to a fault, his loss will be severely felt by those with whom he most constantly associated. His dislike of self-assertion and his scrupulous honesty in the practice of his profession was perhaps an obstacle to his full success at the outset of his career. But none who had employed his services had ever reason to complain of lack of skill, or of that careful attention which he felt was ever due to one who had entrusted himself to his care, whatever the circumstances in life of that patient might be. While regretting his untimely death, it is to be hoped that his habits of careful study and conscientious practice may prove an example to those who are left to mourn his loss.

PROLAPSE OF RECTUM.

MR. EDITOR, — I notice, in *JOURNAL* for April 10th, apparatus for prolapse of rectum, etc. I have recommended for twenty five years the method to place the finger in front of rectum (anus) press up, and pull forward the flesh during defecation. This prevents descent of the bowel.

JAMES O. WHITNEY.

PAWBUCKET, R. I.

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 26, 1879.

Cities.	Popula- tion estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from					
				The Prin- cipal "Zymo- tic" Diseases.	Pneum- onia.	Diphtheria and Croup.	Scarlet Fe- ver.	Diarrhoeal Diseases.	
New York.....	1,085,000	579	27.62	19.63	12.27	2.42	7.05	2.07	
Philadelphia.....	—	—	—	—	—	—	—	—	
Brooklyn.....	564,400	234	21.62	18.37	14.10	7.27	5.13	0.86	
Chicago.....	—	142	—	19.72	13.38	9.15	1.41	1.41	
St. Louis.....	—	96	—	6.24	7.28	4.16	1.04	—	
Baltimore.....	365,000	142	20.29	10.56	8.45	3.52	2.82	2.11	
Boston.....	360,000	150	21.72	14.67	10.00	8.00	2.00	0.50	
Cincinnati.....	—	121	—	24.54	6.61	2.46	14.70	1.63	
District of Columbia.....	160,000	68	22.15	4.41	13.23	1.47	1.47	1.47	
Cleveland.....	—	60	—	18.33	8.03	3.33	6.67	—	
Pittsburgh.....	—	48	—	20.83	12.50	8.33	—	2.08	
Milwaukee.....	—	52	—	17.27	11.54	17.27	—	—	
Providence.....	101,000	38	—	15.55	13.15	2.43	4.86	2.43	
New Haven.....	60,000	26	22.59	11.54	3.85	7.69	3.85	—	
Charleston.....	57,000	—	—	—	—	—	—	—	
Nashville.....	27,000	16	30.83	6.25	12.50	6.25	—	—	
Lowell.....	53,300	25	24.45	4.00	20.00	—	—	—	
Worcester.....	52,500	18	17.87	16.67	11.11	—	—	5.55	
Cambridge.....	51,400	18	18.25	22.22	11.11	22.22	—	—	
Fall River.....	48,500	34	36.55	5.88	8.82	2.94	—	—	
Lawrence.....	38,200	19	25.94	26.32	10.53	5.26	—	—	
Lynn.....	34,000	17	26.08	17.67	11.76	11.76	—	—	
Springfield.....	31,500	8	13.24	12.50	12.50	12.50	—	—	
New Bedford.....	27,000	10	19.31	—	10.00	—	—	—	
Salem.....	26,400	6	11.85	33.33	—	16.67	—	—	
Somerville.....	23,350	5	11.17	20.00	—	—	20.20	—	
Chelsea.....	20,800	6	15.04	50.00	—	50.00	—	—	
Taunton.....	20,200	4	10.32	—	—	—	—	—	
Holyoke.....	18,200	13	37.25	23.08	7.70	15.38	7.70	—	
Gloucester.....	17,100	3	9.15	—	—	—	—	—	
Newton.....	17,100	—	—	—	—	—	—	—	
Haverhill.....	15,500	—	—	—	—	—	—	—	
Newburyport.....	13,500	7	27.63	14.29	—	14.29	—	—	
Fitchburg.....	12,500	4	16.68	—	—	—	—	—	

One thousand nine hundred and fifty-four deaths were reported: 333 from consumption, 328 from the principal "zymotic" diseases, 218 from pneumonia, 104 from diphtheria and croup, 96 from scarlet fever, 65 from bronchitis, 26 from diarrhoeal diseases, 25 from whooping-cough, 18 from typhoid fever, 16 from erysipelas, 13 from cerebro-spinal meningitis, 13 from malarial fever, 11 from measles, two each from remittent, intermittent, and congestive fevers, none from small-pox; indicating an increase in cerebro-spinal meningitis, measles, diphtheria and croup, consumption, and total mortality, a slight decrease in scarlet fever and diarrhoeal diseases, the others remaining about the same. From *bronchitis* 30 deaths were reported in New York, seven in Brooklyn, six in St. Louis, four in Boston, three in Chicago, District of Columbia, and Milwaukee, two in Pittsburgh and Fall River, one in Cincinnati, New Haven, Nashville, Worcester, and Lynn. From *whooping-cough*, 14 in New York, five in Brooklyn, three in Cincinnati, two in Boston, one in Cleveland. From *typhoid fever*, four in New York, three in Chicago, two in Brooklyn and Lawrence, one in St. Louis, Baltimore, Boston, Cleveland, Pittsburgh, Lowell, and Salem. From *erysipelas*, five in New York, two in Brooklyn, Chicago, Cincinnati, and Lawrence, one in Fall River. From *cerebro-spinal meningitis*, four in New York, three in Chicago, two in Cincinnati and Worcester, one in Boston and Lynn. From *malarial fever*, 13 in New York. From *measles*, four in Pittsburgh, three in Cleveland, two in New York and Baltimore. From *remittent fever*, one in Brooklyn and Chicago. From *intermittent fever*, two in Brooklyn. From *congestive fever*, two in Chicago. Brooklyn reported two deaths from hydrophobia. In seventeen of the nineteen cities of Massachusetts, with an estimated population of 848,450, the mortality was increased from diphtheria and croup, cerebro-spinal meningitis, and consumption; about the same from typhoid fever, and diminished from the other prevalent diseases.

The weather remained unsettled at the West, and fine in the Northeastern States, the meteorological record for Boston being as follows:—

Date.	Barom-eter.	Thermom-eter.		Relative Humidity.			Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Daily Mean.	Daily Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Daily Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in Inches.
April 20	29.895	46	55	29	61	32	40	44	NW	NW	W	6 13 8	C	C	C	—	—
" 21	30.150	51	59	36	58	18	28	35	W	NW	NW	8 13 8	C	C	C	—	—
" 22	30.281	53	63	48	50	17	28	32	W	W	NW	12 13 3	E	C	C	—	—
" 23	30.091	53	64	44	42	33	37	37	W	NW	W	12 32 13	O	E	C	—	—
" 24	30.277	49	64	34	41	15	24	27	NW	N	N	12 17 10	C	C	C	—	—
" 25	30.153	44	51	41	59	00	37	52	E	E	S	5 13 9	O	O	O	—	—
" 26	30.140	41	43	39	91	78	82	84	NE	E	E	12 9 1	O	O	O	—	.02
Week.	30.141	48	63	29				44	NW			1927 miles.				1.9	.02

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; T., threatening.

By returns to April 12th, pulmonary diseases were becoming less prevalent, although still excessively fatal in Great Britain; whooping-cough continued severe; scarlet fever, diarrhoea, and small-pox (in Dublin and London) showing a decreased fatality, diphtheria and fevers remaining about the same. The death-rates for the week ranged from 15.0 in Portsmouth to 32.5 in Norwich.

BOOKS AND PAMPHLETS RECEIVED. — First Annual Report of the State Board of Health of the State of Rhode Island for the Year ending December 31, 1878. Providence. 1879.

The Treatment of Dropsy of the Gall-Bladder by Operation (Cholecystotomy), with Notes of a Successful Case. By George Brown, M. R. C. S., L. S. A. (Reprint from the British Medical Journal.) London: Baillière, Tindall and Cox. 1879.

Clinical Charts in Small Volume and Convenient Size for Use in Private Practice. Published by G. T. Swarts, 57 Hancock Street, Boston. (A. Williams & Co.)

Practical Instruction in Animal Magnetism. By J. P. F. Deleuze. Translated by Thomas C. Hartshorn. Revised Edition. New York: Samuel R. Wells & Co. 1879. (For sale by Lee and Shepard.)

Transactions of the Vermont Medical Society for 1878. St. Albans. 1879.

Oyster-Shucker's Corneitis (Corneitis Ostrearii). By W. J. McDowell, M. D., Baltimore. (Reprint.)

An Address on Obstetrics and Diseases of Women and Children, delivered before the American Medical Association June 5, 1878. By Edward W. Jenks, M. D., Detroit. (Extract from the Transactions.) Philadelphia. 1878.

A Treatise on Therapeutics, comprising Materia Medica and Toxicology, with Especial Reference to the Application of the Physiological Action of Drugs to Clinical Medicine. By H. C. Wood, Jr., M. D. Third Edition, revised and enlarged. Philadelphia: J. B. Lippincott & Co. 1879. (A. Williams & Co.)

Economic Monographs. No. XIV. Proposed Legislation on the Adulteration of Food and Medicine. By Edward R. Squibb. (Transactions of the Medical Society of the State of New York, 1879.) New York: G. P. Putnam's Sons. 1879. (A. Williams & Co.)

Results after Excision of the Hip-Joint. By E. H. Bradford, M. D. 1879.

Spermatorrhoea: Its Causes, Symptoms, Results, and Treatment. By Roberts Bartholow, A. M., M. D. Fourth Edition, revised. New York: William Wood & Co. 1879. (A. Williams & Co.)

A Practical Treatise on Surgical Diagnosis. Designed as a Manual for Practitioners and Students. By Ambrose L. Ranney, A. M., M. D. New York: William Wood & Co. 1879. (A. Williams & Co.)

Twelfth Report of the Medical Staff of St. John's Hospital, Lowell, Mass. 1879.

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VOL. C. — THURSDAY, MAY 15, 1879. — NO. 20.

LECTURES.

CLINICAL LECTURE DELIVERED AT BELLEVUE HOSPITAL,
NEW YORK.¹

BY PROF. AUSTIN FLINT, SR.

Pulmonary Edema occurring in a Patient suffering from the Cirrhotic Form of Bright's Disease, complicated with Cerebral Hemorrhage and Hemiplegia; Prompt Relief from Venesection. — GENTLEMEN: The first case which I shall bring before you to-day presents a number of points of interest. The patient, a man of about forty-eight years of age, was admitted to the hospital a little more than a week ago, with a previous history of pneumonia, according to the account given of him. Five or six hours before his admission, however, coma came on, and when he was first seen he was still profoundly comatose, while in addition there were present great dyspnoea and intense cyanosis, so that altogether death seemed imminent. The pulse was tense and sthenic, and no sign of pneumonia could be discovered, but the chest was full of subcrepitant (oedematous) and large bronchial râles. An examination of the heart showed that it was much enlarged, but no cardiac murmur could be detected, although listened very carefully for, while the patient's nose and mouth were held, in order temporarily to prevent the groaning to which he continually gave vent.

Let us pause for a moment in the history to call up before our minds as well as we may the state of affairs at the time of the man's admission. Here was a patient brought into the hospital with a very imperfect history, and suffering from the urgent symptoms just related: what inferences might be drawn from the case, and what conclusions as regards treatment? When a patient is found by the physician in a state of coma, the question at once arises, What is its origin? Sometimes this is due to an injury about the head, which has produced a fracture that may have been overlooked; sometimes to effusion of blood, either meningeal or into the substance of the brain itself. Then, again, there is uræmic, alcoholic, and narcotic coma. With which of these conditions have we to deal? I cannot stop now to go into the differential points

¹ Reported for the JOURNAL.

of diagnosis, as this would occupy the whole of the time allotted for my lecture. In the present case it is important to note that, in addition to the coma, the patient was suffering from the most marked dyspnoea and cyanosis, which would naturally point to something else than disease of the brain. Then the subcrepitant râles all over the chest, which have been mentioned, indicated œdema of the lungs. Now, whence came this? In general, it may be stated that this condition arises from trouble either in the heart or the kidneys, and sometimes in both. Here the heart was found considerably enlarged, but there was no murmur representing any valvular lesion. The question would certainly admit of much doubt whether simple enlargement of the heart might stand in a causative relation to œdema of the lungs, and therefore it seems most probable that there must have been some disease in the kidneys. In this connection, however, it is interesting to consider the significance of enlargement of the heart without valvular lesion. This, as a rule, is simply an effect, and, with the exception of certain troubles at the base of the lungs, is almost invariably the effect of renal disease. What is more, it is always indicative of one special form of renal disease, namely, the cirrhotic.

The practical point in a case of this urgent character is, What can be done for the relief of the patient? In the present instance a measure was adopted which is not often resorted to at the present day, and the fact that this was practiced here was one of the features of the case which induced me to bring it before you. The house-physician at once opened a vein in the patient's arm, and bled him to the extent of twelve ounces; and in this connection I should like to state that I firmly believe that the time is to come when venesection will assume its proper place among therapeutical measures. By this I do not mean to say that I think it will ever come into such general vogue as it was some years ago, when it was so frequently abused; but almost every physician of experience must acknowledge that there are certain cases which we are all liable to meet with in which its employment would be altogether appropriate. In this case it was indicated not because other measures might not have produced the same result, but because the latter would have required more time, and before they had accomplished their purpose the patient might have died. The great advantage about venesection is that it acts at once, and if it is going to be of service in any given case its good effects will be very promptly observed; while the various substitutes for it, such as other forms of depletion, cardiac sedatives, sudorifics, cathartics, etc., all require more or less time for their action. I will add here that the supposed danger connected with blood-letting has been very greatly exaggerated; for in cases where it may perhaps not do any good it has been over and over again shown that it is really of no injury. These apprehensions are entertained particu-

larly by the younger men of the profession, who have had little or no practical experience in regard to it, and therefore I allude to the matter now. Any one, however, who is old enough to remember the former practice must frequently have been struck with the comparative immunity from serious consequences which ordinarily followed even very copious venesection. Patients, as a rule, therefore, tolerate loss of blood much better than is generally supposed, — a fact which is also demonstrated by the severe hæmorrhages which occur in various diseases and abnormal conditions of the system. Thus, even in the later stages of typhoid fever, when there is naturally great prostration, hæmorrhage from the bowels not infrequently occurs, without, apparently, resulting in any further exhaustion of the patient.

Now let us see what was the result of venesection in this particular instance. The notes taken of the case state that the dyspnœa and cyanosis were at once relieved, and that the pulmonary œdema entirely disappeared within half an hour, while the groaning of the patient ceased, and he was evidently much more comfortable in every way. If we are to judge by this case, therefore, we should unhesitatingly say that blood-letting is of decided benefit in pulmonary œdema. I confess that from time to time I meet with cases in private practice in which I cannot doubt that venesection would be of the greatest service, and yet in which, on account of the prejudice prevailing against the practice, as well as other circumstances, it seems best to refrain from resorting to it.

The most urgent symptoms having thus been relieved, the coma next engaged attention, and it was now found that in connection with this there was hemiplegia (left) and hemianæsthesia. In all probability these conditions would depend either on cerebral embolism or extravasation of blood, and it would be inferred that this was of recent origin from the fact that reflex phenomena were lacking. The condition of the pupils was nearly normal, and the temperature about 101° F. Some bronchitis was also present. The next step in the investigation of the case was to examine the urine, and this was found to be pale in color, acid in reaction, and of a specific gravity of 1010. It also contained granular casts, and was distinctly albuminous, although the amount of albumen was not large. The patient involuntarily passed his urine freely in bed, as was also the case with the contents of the bowels. We therefore see that there is well-marked renal disease present, and it is interesting to note that the distinctive characteristics of the patient's urine — the large quantity, the low specific gravity, the presence of granular casts, and the small amount of albumen — are all diagnostic of the cirrhotic kidney, which, you will remember, was mentioned as exceedingly apt to give rise to uncomplicated enlargement of the heart.

On the next day after admission, in addition to other measures, elaterium was administered, probably with the idea of preventing a recur-

rence of the pulmonary œdema. Since then there has taken place a partial disappearance of the coma, but the patient's intelligence still remains considerably clouded. He seems to suffer somewhat from hemicrania, and the hemiplegia and hemianæsthesia still persist. From the long continuance of the coma we are justified in inferring that these symptoms are probably not due to embolism, but rather to cerebral hæmorrhage.

Taken altogether, therefore, I think it must be admitted that this is an unusually interesting case, and in now dismissing it I wish for a moment to recur to the subject of venesection in connection with pulmonary œdema. The house-physician informs me that when the patient was first seen lying on the stretcher it seemed as if he were already past all hope, and the question arose whether it would be better to attempt to do anything for him in his desperate condition, or simply to let him die without molestation. It is highly probable, therefore, that his life was actually saved by the blood-letting, and at present there seems to be every prospect (if we may judge from the improvement that has already taken place) that the man will continue to gain still further. His temperature, I may say, remains about normal, and the specific gravity of the urine varies from 1010 to 1014.

TYPHOID FEVER: ITS CAUSES AND SOURCES, AS EXPLAINED BY THE GERM THEORY OF DISEASE.

BY ALEXANDER R. BECKER, M. D., OF BERKELEY, CALIFORNIA,

Fellow of the California State Medical Society, etc.

IN the following paper I have endeavored, by digesting the work of others, to give to the profession a clear and concise argument for the germ theory as applied to typhoid fever. And I have done so because, as it seems to me, this offers the only logical explanation of *the sources, causes, and symptoms* of that most important and insidious disease. In the preparation of this paper I have consulted a large number of works and periodicals. But I hold myself especially indebted to the very valuable work on *The Germ Theory of Disease*, by T. MacLagan, M. D., which should be carefully studied by all interested in the subject.

CAUSES.

Among the many questions now agitating the mind of the scientific world there is perhaps no one of more vital importance than the *cause* of that class of diseases generally known as the zymotic diseases, but more properly as the specific or continued fevers, as, for example, cholera, small-pox, yellow fever, typhus fever, scarlet fever, typhoid fever, cerebro-spinal fever, diphtheria, measles, etc.

Although these diseases have each their own peculiarities, they yet have many traits in common, pointing to a similarity of causation: each has a more or less definite period of incubation; each is marked especially by the phenomena of fever, by a characteristic local lesion, by a more or less definite period of duration, by being more or less contagious, by occurring, as a rule, but once in a life-time. Where there are so many points in common it is natural and rational to infer that there is a *similarity* of causation. But we cannot go farther and say that they arise from the same cause, because we know that they never breed each other. A case of small-pox imported into a neighborhood never gives rise to measles, nor does a case of typhus ever give rise to diphtheria. In other words, they *always* breed true. In looking, then, for the cause of either one of these diseases, we must be content with no theory which is not applicable to all of the group, that is, in explaining the points of similarity above noted. And, without taking time or space to give the history of all the causes that have been proposed, natural and supernatural, organic and chemical, we will come at once to the point, and express our conviction that in the germ theory of disease, as lately developed, we have found the true solution of the difficulty.

The germ theory is not new, having been several times suggested in past ages; but of late years it has received much attention from some of the brightest minds in the profession, as well as from others already distinguished in different branches of science. But by the latter it has been mostly studied from the biological point of view, and has been considered by them largely with reference to the theories of evolution and spontaneous generation. The latter theory especially is intimately connected with our subject, but the intention and scope of this paper preclude its extended consideration. Suffice it to say, then, that the weight of evidence to date is entirely opposed to the theory of spontaneous generation.

What is the germ theory of disease? It is the belief that certain diseases are produced by the reception into a susceptible system of *specific* organisms, germs, or contagia possessing almost unlimited powers of reproduction.

The first question is, What is a contagium? In his masterly work on the subject, MacLagan says: "A contagium is a morbid agent which is propagated in and given off from the bodies of the sick, and is capable, when received into a susceptible healthy body, of producing in that body a disease similar to the one during whose course it was formed."

By a series of ingenious investigations, M. Chauveau and Dr. Burdon-Sanderson have proved that the contagium is composed of minute *particles*, which are neither soluble nor diffusible; and from the fact

that they have eluded every chemical test it is fair to infer that they are organic, and differ very little from the fluids in which they are known to be contained. The contagium was supposed to be a variety of bacteria, but Dr. Bastian has shown that as fluids known to be contagious develop bacteria, in just so much do they lose their contagious properties. Moreover, bacteria are now recognized as a result of the decomposition of organic matter, and in the case of contagious fluids it is thought that they may be developed from decomposition of the contagia themselves. Probably no one has ever yet seen a contagium, although Dr. Beale and other microscopists have with very high powers made out a mass of "fine granulations" which they have supposed to be contagia. But no glass has yet been made powerful enough to individualize and differentiate them. From the action of the contagia within the body we know that under favorable circumstances they have an almost infinite power of reproduction. "The characteristic quality of a contagium, or virus of a communicable disease, is its capacity of undergoing almost unlimited multiplication when introduced into an appropriate medium."¹

"The poisons of infectious diseases can reproduce themselves, and to an unlimited extent. With a minimum quantity of vaccine virus we can vaccinate a child and obtain vaccine matter from him. From this child ten or even more children can be successfully vaccinated; so that what at first was a scarcely appreciable quantity of the virus of the disease is sufficient to produce the disease in one, ten, one hundred, one thousand, ten thousand, children, and so on *ad infinitum*."²

"Of all perishable things protoplasm is the most perishable." And this dictum holds perfectly true in regard to the protoplasm of contagia, for on exposure to the air they are quickly destroyed. At the same time, under favorable protecting influences, they may retain their power of contagion for a very long period. It will not be necessary to offer proof of this, as every physician will remember examples in his own practice.

This, then, sums up what we know of the contagia: (1) that they consist of minute particles, which are neither soluble nor diffusible; (2) that they are organic; (3) that under favorable circumstances they have an almost infinite power of reproduction; (4) that they always breed true; (5) that they are readily destroyed on exposure to the air, but may under protecting influences retain their virulence for a long time.

One other property these contagia have in common, and in common with all organisms: they require for their support nitrogen and water.

¹ Dr. Baxter, Reports of the Medical Officer of the Privy Council, New Series, No. VI. 1875.

² Liebermeister, Ziemssen's Cyclopaedia of the Practice of Medicine, vol. i., page 9.

And herein we shall principally find the explanation of their effect upon the economy. But after they arrive within the body they can acquire their nitrogen and water *from* the body only; and if they live within the body, and at the expense of the body, what are they? They are *parasites*. Now it is well known that parasites are propagated only in certain localities where they find their own appropriate *nidus*; that different parasites appropriate different localities; and that these localities may be of very small extent. While these contagia, then, as organisms may be able to live wherever they can find a sufficiency of nitrogen and water, as parasites they can reproduce themselves and multiply only where they find their appropriate *nidus*.

By considering contagia in this light, as parasites, we can explain many points heretofore clouded in mystery. When we understand that each disease has its own contagium, which, being a parasite, requires its own particular *nidus*, we can easily understand why these diseases always breed true; also, wherein susceptibility consists. Why is it that one person escapes the disease to which others are falling victims? Formerly no satisfactory answer was possible. Now we know that, for some reason or other, the *nidus* is absent. From some individual peculiarity it may never have been present; from some particular cause — as pregnancy — it may be temporarily lacking; or from a previous attack of the same disease it may have been exhausted. And thus we can also account for the fact that these diseases occur, as a rule, but once in a life-time; the *nidus* is exhausted and not reproduced. Further on we shall see that the necessary *nidus* for the contagium of each disease is undoubtedly located at that point where the characteristic local lesion of that disease afterwards occurs.

Typhoid fever is one of the least contagious of the specific fevers. And why? Because its *nidus* is found in the ileum, and the chances of the contagia reaching this point are comparatively small. The contagia may be taken into the circulation through the lungs, but it is quite conceivable that they might be so received, even in considerable numbers, and yet never succeed in reaching the only place where they could fructify. But the contagia of typhoid fever are usually, without doubt, conveyed into the system along with food or drink, and then the road to the ileum is a broad and easy one, which too often leadeth to destruction." Each one of this group of diseases has its own tolerably definite period of incubation. During this time the contagia are actively multiplying and spreading themselves through every tissue of the body. This period of incubation is terminated by a general *malaise*, accompanied by headache; then one or more chills are experienced; and from these we generally date the commencement of the disease. We do not know — and probably never shall know — how many contagia are necessary to produce the disease, nor at what rate

they are reproduced. But it is perfectly rational to suppose that the severity of the case will depend, first, on the number of the contagia received, and, second, on the vitality of the nidus in the individual attacked. At first the system takes no note of these invaders. But after a time they multiply and permeate the tissues to such an extent that the system rebels. And why? Because these contagia are appropriating to themselves the nitrogen and water necessary to the support of the body and to the due performance of its functions. It can no longer support itself and them too without increased effort. And, as the contagia still go on multiplying day after day, so must the body put forth greater and still greater effort to accomplish the work forced upon it.

From whence do the contagia derive the supply of nitrogen required for their support? Nitrogen is supplied to the body by means of food, both animal and vegetable, and having passed through the various phases of digestion appears in the plasma, or liquor sanguinis, whence it is taken up and incorporated by the nitrogenous tissues. When it has performed its duty it is given back into the circulation and carried to the liver, where it is changed into urea, and, passing on again, is finally eliminated by the kidneys. Now, as the contagia are organisms, and in a state of strong vital activity, they must (1) require the same food as other nitrogenous tissues, and (2) be more urgent in their requisition for it. Consequently they step in and appropriate from the liquor sanguinis the supply of nitrogen which, under normal conditions, should go to support the nitrogenous tissues of the body. This explains why in these cases there is such a wasting of those tissues; they are robbed of their food, and are virtually starving. The patient may be taking in nitrogen in ordinary or even in greatly increased quantities, but it is the contagia, and not his own tissues, that are gaining the benefit of it. The *constructive* processes are therefore interfered with to a very serious extent. But at the same time the *destructive* processes are going on, and of course with greater activity, as a necessary result of the increased activity of the circulation. In other words, a greater amount of used-up nitrogenous material is carried to the liver to be changed into urea; and as a natural consequence there is usually an increased amount of urea eliminated by the kidneys. But sometimes we find, on the contrary, that the amount of urea eliminated is decreased instead of increased. And for the explanation of this apparent contradiction we must look still further into the action of the contagia.

Besides nitrogen, the contagia require water in large quantities for their support.

The fever symptoms — heat, dryness, and thirst — are to be accounted for on two grounds. We have seen that in consequence of the presence

of the contagia the constructive processes must be very greatly increased, although it is the contagia rather than the tissues of the body that gain the benefit of the increased efforts. But the efforts are made all the same, and through the usual processes. We have seen that the destructive processes are also continued and increased. All this implies hyperamia and increased circulation, which is not local but general, because the contagia permeate every part and tissue of the body. But fever patients are continually thirsty. Why? Because the contagia are greedily absorbing the water from the body. These patients consume enormous quantities of water, but they eliminate very little. Why? Because the contagia take it up. And now we see why, in some cases, — they are always the worse ones, — there is a deficient elimination of urea. The urea is present in the circulation in greater quantity, but the kidneys cannot obtain a sufficient supply of water to enable them to excrete it. There is therefore a *retention* of urea, which, if it reaches a certain limit, will produce its own toxic effect upon the system. Moreover, after a time the kidneys may become exhausted and congested and inflamed by their over-exertions, and by the excessive amount of urea passing through them, to such an extent as to make them utterly unfit to continue their functions, and then we have *suppression* of urine.

We have seen that the presence of the contagia in the various tissues of the body necessarily produces an increased circulation, which is general because they are present everywhere. But in each one of these fevers there is a point where the increase of circulation is decidedly more marked, and which results in the characteristic local lesion. In typhoid fever this point is situated in the ileum, and especially in Peyer's patches.

When speaking of the contagia as parasites we pointed out the known fact that parasites are propagated only in certain localities, where they find their own appropriate nidus. Wherein this nidus consists we do not know, but we do know that it constitutes a necessary second factor. In the locality, then, where this nidus exists the contagia are not only present, but undoubtedly in much greater numbers than elsewhere. This fact alone would account for a more marked increase in the circulation. But, over and above this, the contagia are *reproducing* themselves in this locality, and in enormous and constantly increasing numbers. Now, in the higher organisms we know that the phenomena of reproduction are always accompanied by increased heat and circulation, and we may reasonably infer the same with contagia. We have therefore two excellent reasons for *expecting* a decided local hyperamia at the location of the nidus. And local hyperamia is essentially the condition of the local lesion in each one of the contagious fevers.

If the local lesion were produced secondarily, by some poison devel-

oped by the disease, we can see no reason why in the same disease it should always occur at the same point. But if the disease be produced primarily by a parasite which can find its nidus only in a certain definite locality, we see that there is good and sufficient cause for expecting a marked local hyperæmia at that locality. And this local hyperæmia, in various degrees of intensity, constitutes the local lesion.

We have said that the contagia permeate all the tissues of the body. And when we remember the delicacy and sensitiveness of the nervous system we should naturally expect it to show early and continued evidence of disturbance.

We know that the blood supply of the whole body is regulated by the vaso-motor system of nerves, and that this system is exceedingly sensitive to reflex as well as to direct irritation. In the class of diseases now under consideration this reflex action would arise, in the first place, from the locality of the nidus; for here the contagia are not only present and interfering with the constructive processes of the tissues, but they are reproducing themselves in enormous numbers. All this implies the necessity for an increased supply of blood at this point, and consequent stimulation and irritation of the vaso-motor nerves, which are, of course, by reflex action, communicated to the nervous centres. And as the contagia are multiplied and carried to all parts of the body, so must they also from all parts of the body give rise to irritation of this system of nerves. But it has been proved that the vaso-motor nerves take their origin exclusively from the cerebro-spinal system. And when we remember that about one fifth of all the blood in the body is carried to the head, we shall see that the brain is likely to be infested with contagia as soon as, or even sooner than, the other tissues of the body, in which case there would speedily be direct as well as reflex irritation of the vaso-motor system.

An urgent demand is made for more blood to assist in the nutritive processes. The vaso-motor system responds by contracting the capillaries and sending the supply of blood with increased rapidity, by the larger vessels, to those points where it is most needed. The consequence is that with increased arterial action we have capillary anæmia.

Now which of the tissues are particularly dependent on the capillary circulation? The brain, spinal cord, and skin. And so in the capillary anæmia of the brain we find the cause of the headache; in a similar condition of the spinal cord we see reason for backache and general weakness; and in a like state of the skin we can trace the origin of chills. And this explanation is particularly satisfactory when we remember that during a rigor the patient has the feeling of cold, while the temperature of the body, as shown by the thermometer, is really increased. As stated above, with increased arterial action we have capillary anæmia.

But as the contagia are still further multiplied, and penetrate to those tissues chiefly or wholly nourished by the capillaries, the vaso-motor nerves *relax their contractile action* so as to allow of the passage of the now necessary supply of blood, and *then* the patient has fully arrived at the condition of *fever*. It is to be remarked that at this time the headache subsides and generally disappears.

The capillary anæmia is, then, but a temporary condition, a stage in the development of the fever, an effort of nature to conserve the equilibrium of her forces. But this effort is soon overpowered by the rapid spread of the contagia, and the duration of this effort is in direct proportion to the number of contagia present, — in other words, to the severity of the case.

But now, as the contagia continue to multiply and to pervade all the tissues in ever-increasing numbers, what condition do we find in the nervous centres? Just the same as in the other nitrogenous tissues: increased circulation and heat, and at the same time starvation and wasting. But organs of such delicacy as the brain and spinal cord cannot stand either the congestion or the starvation without consequent derangement of function. And so, in proportion to the development of these conditions, we find delirium and convulsions and — if relief does not come in time — coma. But we must not forget that another agent may be also working in the same direction. For, as we have already pointed out, if the kidneys, from previous disease, or from an insufficient supply of water, or from exhaustion, are unable to perform their functions, then an excess of urea remains in the circulation, and superadds its baleful influence to that of the contagia.

But now the question arises, How can this state of things ever end otherwise than in death? If the contagia need only nitrogen and water for their support, why do they not always go on in their rapacious robbery as long as any nitrogen and water remain in the body, and so of course invariably produce death? If we had looked upon the contagia simply as organisms, we could give no plausible answer to these questions. But we have shown good reasons for considering them in the light of *parasites*, and as parasites we have seen that they are absolutely dependent for reproduction on their appropriate *nidus*. But this nidus must sooner or later become exhausted. Now, at the time when this occurs, there must be enormous numbers of the contagia, in various states of development, in the system, and these must of course go on and attain their growth; but in the mean time they are being gradually eliminated by the usual destructive processes of the nitrogenous tissues, and reproduction having ceased their reinforcements are cut off. What, then, occurs within the economy? Why, a reduced demand for nitrogen and water, which produces (1) reduced heat; (2) reduced circulation; (3) an increased water supply for the use of the kidneys; and, (4)

partly from the increased water supply, and partly from the relaxed condition of the capillaries, an increased action on the part of the skin. We see, therefore, that the defervescence is caused by, but does not date from, the exhaustion of the nidus; a proportion, at least, of the contagia remaining in the system must be disposed of before relief can be obtained.

In earlier days, the disease was supposed to begin suddenly with a chill, and to cease abruptly with a sweat; but in these days of accurate thermometry, we know that the temperature rises gradually, even before the chill, and abates gradually, even before the sweat. And the reason is plain: the contagia must have increased to a certain degree before they could cause irritation enough to produce the initial chill, and they must have decreased to a certain degree before they could leave a sufficient water supply to enable the excretory organs to resume their functions, and so produce the critical diaphoresis and diuresis.

But, unfortunately, the disease does not always take this favorable turn, and death still occurs in a lamentably large proportion of cases. Now death may be caused either by coma or by asthenia; or, in other words, either by exhaustion of the nervous system, or by exhaustion of the circulatory system. We have seen that coma is produced by the excessive production of the contagia and consequent impairment of the brain, and precisely so asthenia is produced by the excessive production of the contagia and impairment of the heart. When we remember the vascularity of the muscles of the heart, and the enormous amount of labor imposed upon them by the febrile conditions of the system, it will not seem strange that they should succumb to combined malnutrition and overwork. But, clinically, we are most apt to find a combination of these two conditions of coma and asthenia, and then we must conclude that the whole system is simply overpowered and swamped by the multitude of contagia.

Of course individual peculiarity must have a very great influence in determining the preponderance of one set of symptoms or the other. In children, and in older patients who are of a decidedly nervous temperament, or who have shown a previous tendency to head symptoms, we should expect more of delirium, convulsions, and coma; and in elderly or weakly patients, and in those who have suffered from any disease of the heart, we should anticipate asthenia. But, aside from such individual peculiarities, we should expect death precisely in proportion to the number of contagia produced; and this may explain a fact which is frequently remarked, that is, that strong, robust patients so often "fare hardly." We may rationally suppose that an exceedingly healthy body would present an exceedingly vital nidus, and so, having received the contagia, reproduce them in unusually great numbers.

Having thus tersely, but we hope sufficiently, explained the causation

of typhoid fever and its various symptoms, it is satisfactory to find that we have at the same time given good and sufficient reason for that course of treatment which experience has taught us to adopt as the most satisfactory. By the administration of milk and beef tea we supply the much-needed nitrogen in its most easily digestible forms, and we no longer fear to give water in sufficient quantities.

(To be concluded.)

RECENT PROGRESS IN ORTHOPEDIC SURGERY.¹

BY E. H. BRADFORD, M. D.

Hip Disease. — Extension in hip disease, so common a method of treatment with us, appears to be somewhat a novelty to French surgeons. Its merits are pointed out in recent papers by three French writers. Armand² discusses the effect of extension. To prove that the joint surfaces at the hip-joint are separated by extension, which is denied by some German authorities, Armand inserted iron pins, one into the ilium and the other into the trochanter, driving them firmly in through the skin and muscle. On applying an extension of ten pounds the two iron pins were seen to have been pulled apart two millimetres. The beneficial effects of extension, according to the writer, are due to the fact of distraction of the affected surfaces, to overcoming the exaggerated contraction of the muscles about the joint, and also, in M. Armand's opinion, as a means of partially immobilizing the joint.³

Hutchinson⁴ suggests a "physiological" treatment of hip disease, which, if able to stand the test of farther experience, promises to be a great advance in the treatment of joint affections.

He claims that apparatuses are "unnecessary, cumbrous, and uncomfortable," and to be abandoned if it can be done without danger. In treating hip disease there are four indications: (1) fixation of the joint; (2) extension; (3) removal of the superincumbent weight; (4) exercise, to improve the general condition.

According to Mr. Hutchinson, sufficient fixation of the joint is given by the muscles above the joint. Extension enough to relieve the spasm of the muscles of the thigh which crowd the head of the bone into the inflamed acetabulum can be obtained if the patient be placed upon crutches, the sound foot being raised by a high shoe, so that the foot on the affected side cannot touch the ground, and as the patient stands the limb is suspended.

¹ Concluded from page 640.

² Thèse de Paris, No. 36, 1878.

³ Revue des Sciences médicales, October 15, 1878. For effect of extension on the knee-joint, Riedel, Deutsche Zeitschrift f. Chir., Bd. x., Heft 1, 1878.

⁴ American Journal of the Medical Sciences, 1879.

If necessary, extension can be applied at night in the ordinary way by weight and pulley. In Mr. Hutchinson's cases this was not required. The method of treatment is not suitable for "acute arthritic coxalgia," where the patient cannot be moved without causing extreme pain. Extension by long splint or weight and pulley is in these cases required, and rest in bed until this inflammatory stage is passed.

Dr. Hutchinson's cases treated in this way are few as yet, as he has employed the method of treatment but a short time. One of the reported cases appears to be exceedingly satisfactory.¹

In a recent article in the JOURNAL, March 6, 1879, Dr. C. F. Taylor, of New York, illustrates the "mechanical treatment" of hip disease and the proper theory which should regulate it by citing a few successful cases.

Results in Excision of the Hip-Joint. — Elben² reports the analysis of results in three hundred and eighty-eight cases of excision of the hip-joint for coxitis. One hundred and eighty-four died; seventy-five did not remain under observation. Of the living, in sixty-one only were the ultimate results as to the usefulness of the limb ascertained. Of these, forty-one were able to walk without an apparatus, fifteen needed an apparatus, and five had no use of the limb.³

Inequality in the Length of the Lower Limbs. — Irregularity in the length of the lower limbs has hitherto been regarded as a rather exceptional deformity. Mr. Barwell, in his book on Lateral Curvature, mentions having met with a few cases in healthy people where noticeable difference without known cause was found.⁴

Dr. Hunt⁵ claims to be the first to have suggested that "bilateral symmetry as to length is exceptional," a fact of the greatest importance in suits for malpractice, as is illustrated by Dr. Hunt's article, and also in orthopædic practice.

Dr. Cox⁶ measured the lower limbs in fifty-four healthy persons, and in only six were the limbs of the same length. The variations were from one eighth to seven eighths of an inch.

Dr. Wight⁷ gives the measurements of sixty persons, and concludes "that the greater number of limbs, comparing the limbs of the same person, show a difference in length. About one person in every five has limbs of the same length." The difference is usually from one eighth of an inch to an inch. In one case the difference was as great as one and three eighths inches.

¹ See also Proceedings of the Medical Society of the County of Kings, April, 1879, page 27.

² Centralblatt f. Chirurgie, No. 2, 1879.

³ See also On Excision of Hip-Joint, Poore, New York Medical Record, February 1, 1879.

⁴ The reporter has recently seen a similar case in a child four years old.

⁵ American Journal of the Medical Sciences, January, 1879.

⁶ American Journal of the Medical Sciences, April, 1875.

⁷ Archives of Clinical Surgery, vol. i., No. 8, February, 1877.

Mr. Callender¹ believes that further investigations are needed before the asymmetry in the length of limbs be accepted. He has measured forty healthy individuals, and found the limbs of equal length in all but two, in whom the variation was slight.

The matter seems to be settled by the measurements of the bones of the lower extremities by Dr. Roberts,² who found asymmetry the rule in femora and tibiae in eight skeletons, and by Dr. Dwight.³ The latter reports the measurement in eleven skeletons: in only five were the femora equal; in one case the difference was three fourths of an inch. Tibiæ were equal in only two cases. In some cases the longer femora and tibiae were on the same side, and in some cases on different sides.

Treatment of Club-Foot.—Ogston⁴ claims that the "pernicious doctrine that ordinary congenital club-foot depends on paralysis or contraction of certain muscles and fasciæ is still believed. Consequently a cure, or at least a marked improvement, is too confidently expected to result from the operation of subcutaneous division of these structures." Tenotomy is "one of the smallest and least weighty factors" in the treatment of club-foot. Tenotomy should be regarded as merely an adjunct to other means of treatment.

The deformity is not due to either paralysis or contraction of certain muscles; the whole limb is distorted; every structure contributes its relative share towards producing the deformity and towards keeping it up. The proper treatment consists in fulfilling the indication of gradually bringing the limb into the right form. Tenotomy is required because the muscles are powerful structures, but their division is no essential part of the treatment. Division of anything except the tendo-Achillis is rarely necessary. The fashion of promiscuous division of all the main tendons around the ankle cannot be too strongly condemned. Such tendons as possess synovial sheaths cannot be divided without the certainty, or next to certainty, that they will never unite,—a fact often experimentally proved, and never refuted. It is a mistake to divide tendons according to any fixed plan or rule, the only wise course being to wait until, during the progress of the foot towards rectification, it becomes evident that some structure, whatever it be, must be divided. The tendo-Achillis is almost always to be cut, and as a rule this is the only structure requiring division. This should not be divided until after the foot has been unfolded, so that the deformity has become an equinus.

Dr. Ogston believes that mechanical treatment is indispensable in treating club-feet. The use of elastic tubing, as advised by Mr. Bar-

¹ St. Bartholomew's Hospital Reports, vol. xiv., 1878, page 187.

² Philadelphia Medical Times, August 3, 1878.

³ Identification of the Human Skeleton. Massachusetts Medical Society's Communications, 1878, page 175.

⁴ Improved Method of treating Club-Foot, Edinburgh Medical Journal, December, 1878.

well, is a method of mechanical treatment, but not so useful in many cases as some other methods. Ogston prefers the repeated application of plaster-of-Paris bandages. The child should be chloroformed, in order to keep the foot still during the application of the bandage. The foot and leg should be manipulated and brought into position; a flannel bandage is applied directly to the skin, and the tendency of the foot to resume its former position overcome by passing loops of adhesive plaster, which are held by an assistant, the one over the toe and pulled outward, the second over the instep and pulled inward. A plaster bandage is then adapted. This should be renewed about every six weeks. As soon as the varus position is corrected the tendo-Achillis is to be cut and the foot gradually pulled upward in the same way, and a plaster bandage applied.¹

THE CONVENTION OF AMERICAN MEDICAL COLLEGES.

IN compliance with a series of resolutions offered by Professor Gross at the last meeting of the American Medical College Association, held at Buffalo in June, 1878, a call was issued by this association for a convention of delegates from all duly accredited medical colleges in the United States to meet at Atlanta, Georgia, May 2, 1879. Each medical school was requested to send two delegates, one from its board of trustees, the other from its faculty, and to instruct these representatives so as to authorize their action in behalf of some uniform system of medical teaching more in accordance with the spirit of the age and the standard of education in Europe. When the convention assembled, Prof. S. D. Gross, of the Jefferson Medical College, was called to the chair, and Prof. Starling Loveing, of the Starling Medical College, of Columbus, Ohio, was appointed secretary. The committee on credentials announced that the following schools were represented: State University of Iowa, T. S. Parr and D. F. Peck. Starling Medical College, S. Loveing. Miami Medical College, John A. Murphy. Medical Department University of Michigan, E. G. Dunsted. College of Physicians and Surgeons of Baltimore, E. Lloyd Howard and John S. Lynch. Kentucky School of Medicine, A. B. Cook. University of Louisiana, E. S. Lewis. Woman's Medical College of Pennsylvania, Frances E. White and F. B. Pearce. Rush Medical College, Chicago, Moses Gunn. Medical College of South Carolina, J. Ford Prisleau and J. P. Chazal. Detroit Medical College, Leartus Connor. University of Louisville, John D. Crowe and John M. Bodnie. Vanderbilt University, T. Menees and D. C. Kelley. Louisville Medical College, C. W. Kelly and W. B. Fleming. Medical College of Indiana, J. E. Hibbard. Atlanta Medical College, John G. Westmoreland, J. T. Johnson. Central University Louisville, Dudley Reynolds. Jefferson Medical College, Samuel D. Gross. Chicago Medical College, N. S. Davis. Medical College of Ohio, W. W. Dawson. University of Maryland, L. McLean Tiffany. Southern Medical College, T. S. Powell.

¹ Other recent papers on club foot: An Analysis of Forty Cases, Swan, Medical Press and Circular, April 24, 1878; Shaffer, Traction in a New Apparatus, New York Medical Record, November 23, 1878; Hutchinson, New York Medical Record, December 14, 1878.

Medical College of Evansville, Indiana, H. G. Jones and G. B. Walker. Nashville Medical College, J. Roberts, Duncan Eve, A. L. De Maas. College of Physicians and Surgeons, Keokuk, J. C. Hughes.

The meeting being organized, Prof. N. S. Davis read the preambles and resolutions adopted at the last meeting of the American Medical College Association, and stated that the object of the convention was to have some authoritative expression of opinion from the colleges in regard to uniformity in medical teaching, and to see if the colleges of this country could not be induced to take a step forward. The students should furnish evidence that they have mastered the ordinary English branches, and should be required to attend three annual courses of medical instruction prior to graduation. The sentiment of the meeting was expressed in the following propositions, the first of which passed after discussion; the second passed unanimously.

First, all medical colleges should require attendance upon three regular courses of lectures during three separate years before admitting students to become candidates for the degree of M. D. Second, the medical colleges should require, before admitting to matriculation, a preliminary examination, such examination to embrace at least the elements of the physical sciences in addition to a fair English education.

On motion these propositions were directed to be transmitted to the American Medical College Association, and that body was apprised of the action of this convention, which adjourned *sine die*.

THE AMERICAN MEDICAL COLLEGE ASSOCIATION.

THIS Association, of which the object is the confederation of American medical colleges, so as to secure uniformity of medical teaching and maintain a creditable standard of attainments among graduates, also convened in annual session in Atlanta on the Saturday before the meeting of the American Medical Association, Dr. N. S. Davis presiding. Seventeen colleges were represented. On motion of Dr. W. F. Peck, resolutions of respect and condolence were adopted, deploring the death of the president of the Association, Dr. John B. Biddle, during the past year; and they were ordered to be entered upon the minutes. The propositions embodied in a communication from the Convention of American Medical Colleges, favoring three regular courses of lectures in three separate years, and advocating a preliminary matriculant examination, were freely discussed. As the former was in effect an amendment to the Articles of Confederation, it was laid over for one year. The second question was also laid upon the table until the next meeting. Professor Bodine offered the following amendment:—

“*Resolved*, That the majority of the members of one faculty shall not constitute the majority of the members of another faculty, unless the sessions of the two schools are held simultaneously,” which was also laid over.

The following resolution was offered by Dr. S. Chaillé, and, after discussion, was adopted:—

“*Resolved*, That it shall be considered derogatory to the dignity and good

standing of any medical college represented in this association to advertise in any other than a strictly medical publication the names of its professors, with their respective chairs."

Professor Chaillé also offered the following amendment, which was laid over under the rules : —

"No college shall advertise, in any other than a strictly medical publication, the names of its professors, with their respective chairs."

Prof. Greenville Dowell offered the following : —

"Resolved, That the Metric System shall henceforth be used in the minutes of this Association, and in all other papers published under its authority, and that the professors represented in this Association be requested to teach the Metric System in their schools," which was tabled.

The subjoined amendment was offered by Professor Dunster: For Section I. Art. V. of the By-Laws, substitute the following : —

"Delegates to the meetings of the Association may be chosen from among the members of the governing board of a college, or from members of the faculty having a vote upon the graduation of students, or from both, but in no case shall such double representation entitle the college to more than one vote in the Association."

Professor Gross, of Philadelphia, was elected president of the Association for the ensuing year, Prof. N. S. Davis, of Chicago, vice-president, and Dr. Leartus Connor, of Detroit, secretary and treasurer.

THE ASSOCIATION OF AMERICAN MEDICAL EDITORS.

IN the Senate Chamber of the Capitol at Augusta, Georgia, May 5, 1879, the Association of American Medical Editors held its eleventh annual meeting on the evening before the session of the American Medical Association, fifteen journals being represented, as follows : —

Dr. L. Connor, *The Detroit Lancet*.

Dr. Duncan Eve, Dr. D. J. Roberts, *The Southern Practitioner*.

Dr. Frank Woodbury, *Boston Medical and Surgical Journal*.

W. B. Jones, M. B., *Southern Journal of Medical and Physical Science*, Nashville.

Dr. E. S. Dunster, *Michigan Medical News*.

Dr. T. S. Powell, *Southern Medical Record*.

Dr. Theophilus Parvin, *American Practitioner*.

Dr. W. T. Goldsmith, *Southern Medical Record*.

Dr. A. N. Bell, *The Sanitarian*.

Dr. J. G. Westmoreland, *Atlanta Medical and Surgical Journal*.

Dr. Wm. Brodie, *New Preparations*.

Dr. Robert C. Word, *Southern Medical Record*.

Dr. Dudley S. Reynolds, *The Medical Herald of Louisville*.

Dr. J. V. Shoemaker, *Medical Bulletin*.

Dr. Word, of the *Southern Medical Record*, acted as the secretary of the meeting.

The retiring president, Dr. Wm. Brodie, delivered an address on Medical Journalism, in which he strongly condemned the practice of allowing patent medicines to be advertised in reputable medical journals, and denounced it as contrary to the spirit of the Code of Ethics. He concluded by offering a series of resolutions expressing this sentiment. On motion of Dr. Dunster, the resolutions were adopted, and ordered to be presented to the American Medical Association. Dr. Parvin urged the publication of details of cases by country physicians, as a means of increasing our knowledge of clinical medicine. He announced the death of two medical editors, Dr. Isaac Hayes and Dr. Waddell, and, upon his motion, a committee was appointed to present a proper memorial upon this subject. After some interchange of opinions and social converse, the Committee on Nominations reported the following ticket for officers, which was unanimously elected, the secretary casting the ballot for the Association:—

President, Dr. Thomas S. Powell, *Southern Medical Record*, Atlanta, Ga.

Vice-President, Dr. Frank Woodbury (Philadelphia), *Boston Medical and Surgical Journal*.

Secretary, Dr. Frank Davis, *Chicago Medical Journal*.

Place of meeting in 1880, New York city. The editors of the *Southern Medical Record* gave a dinner to the Association on the 7th of May, at the residence of Dr. Powell, which greatly enhanced the pleasure of the meeting, and extended the opportunities for acquaintance and social intercourse, the visitors carrying away with them a warm appreciation of Georgia hospitality.

THE AMERICAN MEDICAL ASSOCIATION.

In the city of Atlanta, Georgia, the thirtieth annual meeting of the American Medical Association was convened on the 6th of May, 1879, and, as usual, remained in session four days. On account of the distance from the homes of most of the members, it was scarcely expected that any considerable number would be present, but it was found that about three hundred and fifty delegates were in attendance from all parts of the country, the Southern States more particularly. Among those present were Professor Gross, N. S. Davis, J. M. Toner, Governor A. Garcelon of Maine, L. Sayre, J. J. Woodward, Theophilus Parvin, R. Beverly Cole of California, Greenville Dowell, Eugene Grissoun, Chas. F. Folsom, L. F. Warner, Joseph H. Warren, H. O. Marcy, Azel Ames, Jr., E. Seguin, Montrose A. Pallen, Alfred C. Post, Hermann Knapp, J. L. Cabell, C. W. Chamberlain, Chas. W. Page, Dudley S. Reynolds, R. J. Dunglison, and Wm. B. Atkinson.

While the work in the sections, with but few exceptions, was less valuable than usual, and much time was wasted by reading papers unduly long and on unimportant subjects, the reports on the progress of the several departments of medical science, presented in general session by the chairmen of the sections, were of more than usual interest and value, and were listened to with marked attention. The weather was extremely favorable for the Association, and indeed was almost too fair, as it had a tendency to lead the members to desert their work in the sections in the afternoon, in order to accept the hospitality of

private citizens, and to enjoy driving through the streets of this capital city, which has been termed the Chicago of the South, and which, in the combined advantages of beauty of location, healthfulness of climate, and cordiality of its citizens, is probably unexcelled by any city of its size in America.

The private entertainments were magnificent in their hospitality, and were characterized by such unmistakable appreciation and kindness as to be highly complimentary to the Association; they reflected the greatest credit upon the committee of arrangements and the profession and citizens of Atlanta.¹

(*To be concluded.*)

ADULTERATION OF FOOD AND MEDICINE.

OUR community preserved its equilibrium pretty well, notwithstanding the revelations concerning its food and drink proffered by Dr. Angell under cover of the Social Science Association. In fact, these disclosures, from the serious and careful refutations which they immediately elicited, had the unexpected effect of reassuring those whom they were intended to alarm. With regard to the use of poisonous adulterants, Professor Babcock, for several years the official analyst of Boston, assures the public that in a large experience he had rarely found, in foods or drinks, substances which would be likely to be injurious to health. According to the same authority, the records of the milk inspector of the city of Boston, extending over a period of twenty years, give the sworn statements of the results of nearly five hundred analyses of milk, and in no instance is anything other than water and caramel reported. The average amount of water found in Boston milk was about ten per cent., which amount is decreasing.

There is certainly nothing in this over which to get very much excited, or to lose one's appetite, and probably nothing with which local boards and the State Board of Health are not fully competent and ready to deal.

We have been led to indulge in a little local self-complacency in reference to this question of the adulteration of foods, etc., by the recent offer of a large sum of money by a liberal gentleman to the Massachusetts Public Health Association for the examination of food and medicines, and the prosecution of adulteration before the courts, and also by the perusal of a paper reprinted from the Transactions of the Medical Society of the State of New York.²

We doubt the necessity for the work which the Public Health Association proposes to undertake in this direction, and, bearing in mind the experiences in England under the British Sales of Food and Drugs Act of 1875, we doubt still more the practical results of its efforts, even when backed by zeal and money, without some very careful previous legislation, a good outline of which we have in this paper of Mr. Squibb. By what he terms a "very rough estimate" he calculates that the losses to the population of the State of New York, "through practices of carelessness and adulteration, through over-com-

¹ The entertainments will be referred to more particularly in our next number in a letter from Atlanta.

² Proposed Legislation on the Adulteration of Food and Medicine. By Edward R. Squibb, of Brooklyn. New York: G. P. Putnam's Sons.

petition and greed for money making, which such a law is intended to check, and finally prevent, cannot be less than seven hundred thousand dollars per annum, though probably much more ;" and he estimates that if only one fifth of this loss were saved it would still be a considerable economy to establish a state board of health at a cost of eighty thousand dollars a year, without trusting to fines or emoluments to reimburse any part of such cost. According to this scheme, a state board of health is to be created for the purpose of executing the proposed law, to which other functions may be added as the occasion arises. In this State the analysis and prosecution of adulterations is permitted to the board, but is not obligatory, and not certainly its chief function. Our author thinks that the prosecution of offenses of this class by institutions or societies has rarely, if ever, been effectively done. He appreciates the difficulties in the way of a national act, and the importance and feasibility of similar legislation in the different States. The necessity for a very careful definition of what constitute food and medicine, and the offense of adulteration, is pointed out. In a note at the end of the pamphlet are some instructive examples of the difficulties met with under the British Sales of Food and Drugs Act, and which are liable to present themselves in all large communities. To these might be added a remarkable example which occurred in London last January. The officer of health for the city applied to the Mansion House for an order for the condemnation of seventy-nine sacks of flour as unfit for human food. This so-called flour was adulterated with seventy-nine per cent. of sulphurate of lime or plaster of Paris. The plaster head of a donkey made from it was exhibited to show the nature of the article. The magistrate, however, refused to grant the order for condemnation on the ground that it was his duty "to protect the public;" that it was not satisfactorily proven that the mixture was intended for food; and he proposed that an individual who had advanced a sum against the flour should come into court and prosecute the importers for obtaining money under false pretenses.

If this subject of adulteration is to be discussed, and any additional legislation for its prevention is requisite, Mr. Squibb treats it in the serious and accurate spirit which it requires. As communities grow larger, competition sharper, and the lot of the poorer classes harder, the need for additional activity in the prevention of adulteration will doubtless make itself felt. But we believe that the laws and the provision for their execution are sufficient in Massachusetts for the present emergency.

MEDICAL NOTES.

—The meetings at Atlanta seem to have been favored with exceptionally fine weather and a fairly large attendance. We present this week an account of some of the work done preliminary to the meeting of the Association, a further report of which will be given next week. At the meeting of the National Board of Health, Dr. Turner, the president, and Dr. Billings, the vice-president, were present, and also Dr. Folsom of this city. The principal health and quarantine officers of the United States were invited to attend. The Sanitary Council of the Mississippi Valley, which had been called at Mem-

phis, adjourned to meet at Atlanta, that it might consult with the National Board. The result of these deliberations was the adoption of views strongly in favor of the adoption of a national system of quarantine, not only as regards seaports, but also river and railroad travel. The feeling of the South was represented to be very strong upon this point. Considerable disappointment is said to have been felt by the board that the Harris Bill (a report of the discussion of which we give elsewhere) did not pass. Dr. Lewis A. Sayre was elected president of the National Association, and its next meeting will be held in New York.

— Some of our readers may have noticed lately, in the windows of druggists' shops, certain articles offered for sale under the name of "Dr. Durkee's Liver Pads." As the impression is likely to be produced that these things were contrived by the late Dr. Silas Durkee of this city, it is thought but just to his memory to state that this is not the fact. No one acquainted with him could for a moment believe it. We also learn that the proprietors of the article in question deny that the name they have adopted has any reference whatever to Dr. Silas Durkee.

— Dr. George B. M. Rowe has been chosen superintendent of the City Hospital. He succeeds Dr. Cowles, who has been appointed superintendent of the McLean Asylum for the Insane.

— The death of Dr. Charles Murchison, F. R. S., from heart disease, is announced as having occurred April 23d in London.

— Dr. F. A. Howe, of Newburyport, has sailed for Europe, to be absent about three months.

PHILADELPHIA.

— An interesting case of self-mutilation occurred in the Insane Department of the Pennsylvania Hospital recently. One of the patients, a man under middle age, deliberately dug out his left eyeball with his finger nails, more particularly that on the forefinger of his right hand. The eye was perfectly healthy, and had not occasioned him any pain. It was enucleated as well as it could have been done by a skillful surgeon, the muscles being cut close to the globe, and the optic nerve looking as if divided with the knife. Having been rather noisy during the day he had been strapped in bed, but the hands were not secured, or the injury could not have occurred. While the patient was doing the mischief he kept perfectly quiet; he then summoned an attendant, and said that his eye was bleeding. That the operation was not painless was shown by the fact that he complained loudly when the surgeon examined the parts afterward. A case almost parallel with this occurred here some years ago; but the mania for mutilation among males seems more particularly directed to the genitals. Dr. Thomas G. Morton says that some years ago one of the patients was seen giving something to the fowls in the garden. Some one casually inquired what he was doing, and he replied that he was "feeding his testicles to the ducks." On examining him it was found that he had actually castrated himself, and had chopped his testicles into mince-meat, which he used as bait for the ducks. This story reminds one of the dogs of Paracelsus and his celebrated radical cure for hernia.

— The walking mania is on the decline. A good commentary upon the in-

tellectual status and scientific value of the performance was recently given in this city. A Philadelphia character, well known in the streets during the day and in the station-house at night, who is called "two for five" (because in his humble avocation as street vender of lead-pencils these words are most often reiterated), was induced to walk a match against time, which was a success and was largely attended. The fact that he was well known as an idiot rather added to than detracted from the attractions of the entertainment, and did not prevent him from carrying off the purse. He is now the lion of the hour, and indulges in the luxury of a clean shirt and white necktie, and is open for an engagement for a match with some other idiot.

The cruelty of making women walk in these pedestrian contests for the benefit of speculators was well set forth in a memorial and protest from the committee of hygiene of the Philadelphia County Medical Society, addressed to the mayor of the city, and requesting his interference. The resolutions pointed out that these exhibitions were devoid of any scientific value, their only interest consisting in the physical torture of depriving a woman of sleep, except a few minutes at a time, for periods extending to one month, the distance walked each day being only twenty-four miles, and therefore not remarkable. Some of the poor subjects themselves are known to be suffering from pelyic disorders, which must be aggravated by this prolonged exertion, being forced as they often are by brutal men to continue at the task until they drop utterly exhausted, in a condition from which they must be months in recovering. It would scarcely be credited that our advanced civilization would tolerate such exhibitions as these.

— At the last meeting of the County Medical Society Dr. Allis made some remarks upon the Treatment of Fractures involving the Elbow-Joint, in which he blamed the internal angular splint for a peculiar deformity often resulting, which he graphically termed the "shot-gun" deformity. When the arm is extended at right angles to the body, the fore-arm instead of being in the line with the arm, in this condition is deflected to the ulnar side. Dr. R. J. Levis offered some practical observations upon his treatment of fractures which were original, and which will be given in detail in a subsequent number of the *JOURNAL*.

— The state legislature has again failed to pass the bill creating a state board of health.

WASHINGTON.

— The bill defining the powers of the National Board of Health, introduced by Mr. Harris into the senate on April 30th, was met by a resolution offered by Mr. Hamlin to recommit the same, with instructions to report a code of rules and regulations by which the provisions of the bill are to be enforced. After a long and interesting discussion, occupying parts of the sessions on April 30th, May 1st, 2d, and 5th, the resolution prevailed, and the bill was recommitted. — Mr. Hamlin thought that the rules and regulations respecting commerce should be made more clear, and that, as the bill read, too much power was given to men with no knowledge of commerce. He raised the question as to how far its provisions might interfere with foreign powers, or with certain stipulations in treaties with the same. — Mr. Kernan discussed

the influence of the bill on the port of New York and its quarantine laws, and read from the *Journal of Commerce* a letter by Dr. Vanderpoel, health officer of that port, showing the defects in a recent order from the secretary of the treasury, establishing a rigid quarantine on certain materials imported from Russia, and the consequent embarrassment to foreign commerce. — Mr. Garland, in reply, showed by the provisions of the bill that the powers of the board were doubly guarded by requiring the concerted action of the president and secretary of the treasury in approval; pointed out the necessity for such legislation; and asked, if the board be not considered the proper party, that such proper party be named, etc. — Mr. Harris (May 1st), in further reply, considered that the bill dealt with the commerce of foreign nations, and among the several States; that with these the States themselves could not deal; and that there are only seventeen of the States pretending to have quarantine regulations at all. The New York quarantine system was an exception to the inefficiency of the others, which latter he characterized as utterly inefficient, and without uniformity or reliability. The bill requires the coöperation of the board with sanitary authorities, and authorizes such local authorities to enforce its provisions. — Mr. Morgan (of Alabama) made some very extended remarks to show that yellow fever cannot be controlled by quarantine, and read the report of the British Commission of 1852 to support his views, alluding to what had been already stated in the course of the debate, — that every season found cases of yellow fever in New York harbor, at New Orleans, and at Mobile. — Mr. Jonas (Louisiana), in reply, gave it as the opinion of nine tenths of the medical profession in localities where the disease had prevailed that it was imported, and stated that in New Orleans there were no cases from 1858 to 1866, a few sporadic cases in 1866, an epidemic in 1867, no cases from 1867 to 1878, except a few sporadic cases in 1873, 1874, and 1875. Both Morgan and Jonas cited Dr. Choppin, president of the New Orleans Board of Health, in support of their views, and the discussion did not make it very clear as to which view he held. The letter of Dr. Choppin as read referred simply to the importance of letting local authorities manage their own quarantine, without calling in question the efficacy of the quarantine itself. Mr. Jonas called attention to the fact that the letter was written last spring, before the last epidemic, and before the establishment of the National Board of Health; that many of the statements would not be applicable to the present bill; and that he was satisfied of the concurrence of the New Orleans Board of Health in the provisions of the bill itself. — Mr. Plumb (Kansas) discussed Sections 9 and 10 of the bill relating to diseases of cattle, which were inserted at the instance of the committee on agriculture. He offered an amendment to give the board increased power and jurisdiction over the quarantine of cattle, and considered the propriety of including as a member of the board some one especially skilled in veterinary art, etc. — Mr. Maxey (Texas) considered the exclusion of yellow fever from Texas as due to the rigid quarantine. He desires to have the Sections 9 and 10, relating to diseases of cattle, stricken out entirely from the bill, as not coming properly within the province of the board.

LETTER FROM LONDON.¹*The Care of the Insane in Great Britain. — Lunacy Laws.*

MR. EDITOR, — In my last letter I gave you some account of our present lunacy laws, and of the various phases through which the question passed before we reached our present stand-point. I stated that the act which forms the basis for the somewhat complicated system designed to prevent abuses was passed in 1845 at the instigation of the present Earl of Shaftesbury. For thirty years it has worked with tolerable smoothness, but the world gets more critical as time goes on, and arrangements which were thought to be as near perfection as possible twenty years ago are now found to be full of crudities and imperfections. First and foremost, attention is being called to the general ignorance which exists on the subject of insanity, both in its medical and its legal aspects, amongst medical practitioners as a body. Notwithstanding the great power which is put into their hands — for what power is greater than that of depriving men and women of their liberty? — no proper provision is made for the education of students in this important branch of the profession; where the means of study are provided, no compulsion is brought to bear upon them to insure their making use of it, and at scarcely any of the examinations is the subject included in the list of those upon which students will be questioned. Some statistics bearing on this point which I recently obtained show that out of six hundred students who are annually entered at the various medical schools in London, not more than from forty to fifty at the outside get any methodical clinical instruction in mental diseases, and not more than a fourth of the whole number attend any lectures on the subject. Even where lectures are delivered they are for the most part very few in number, and are introduced into the course on medical jurisprudence. Thus, then, the vast majority of practitioners are turned into the world without having ever seen a lunatic medically, profoundly ignorant of everything which relates to insanity, and yet liable at a moment's notice to be called upon to decide knotty points regarding the best method of dealing with persons who, though eccentric, are perhaps quite harmless and happy in their liberty. And this is not all. Every year there is a considerable number of cases where the validity of a will is contested on the ground of insanity. In such cases medical men are the most important witnesses, and the disposal of property is decided very much by the evidence which they give. Yet for all these important duties the general run of practitioners are wholly uninstructed, and have to trust to their common sense to decide upon their course of action. The anomaly involved by such a state of things is so outrageous that it is surprising that something has not hitherto been done to put a stop to it. It will not probably be tolerated much longer, and various means are being suggested for its cure. One party is in favor of taking the power of certification out of the hands of the ordinary practitioners, and putting it into those of experts. This, however, is a measure which would be contrary to the general feeling of the profession. There is a much stronger party, including in its ranks some of the most eminent psychological specialists,

¹ Concluded from page 660.

who would like to see the study of insanity included in the ordinary curriculum of general medicine. They are in favor of bringing its treatment more within the scope of the general practitioner; they would lessen the influence of asylums, and would treat a much larger number of patients who are not dangerous at home among their friends, or as single patients in the private families of medical men. All those who look at the question in this light would strongly deprecate any plan which would tend to specialize more and more the study and treatment of mental diseases. The suggestion to which I have above referred, of placing the certification of insanity in the hands of experts, is as follows: Any medical man should have the power of sending a patient whose mental condition pointed to insanity to a special hospital, — and in every district there would be one for the purpose, — but beyond this he would be unable to act. Immediately after his reception at the hospital the patient would be examined by an expert, who would be a public servant kept for that and analogous purposes, and the power of certification would lie wholly in the hands of the expert. He would decide what should be done with the patient, and, in the event of his consigning him to an asylum, he would visit him from time to time, and report upon his progress. Thus the functions of the ordinary medical practitioner would be reduced simply to calling attention to the case, and it would then pass into the hands of the pure specialists. So long as the education of students in this subject is so totally neglected as it is at present, nothing short of some measure allied to this will satisfy the public; the only other alternative is to make it compulsory for students to attend lectures, and to go through a sufficient course of clinical study in mental diseases, and it is in this direction that I believe the next step will be taken.

The question which of all others, however, is exciting the public mind has reference to the relative merits of public and private asylums. An idea seems to have got abroad that persons are needlessly sent to private asylums for the sake of the profit which they bring to their proprietors; or that, having been rightly committed to the asylum, they are kept there much longer than there is any occasion for, — even long after the normal tone of mind has returned. These charges are by their very nature difficult to parry. In very many cases insanity is by no means obvious to the ordinary observer: in fact, is often with difficulty detected by the expert, though in certain directions it may perhaps be present in an aggravated form. The charge of wrongful confinement is generally brought by the patient himself after his discharge, and in such cases there are almost always a number of people to come forward to assert that, though often with the patient, they had noticed nothing wrong about him. Yet in such cases it frequently happens that nothing short of confinement would have constituted efficient treatment. Again, an insane patient frequently improves so rapidly after admission to an asylum that it is difficult to say where his weak point lies; and yet such patients if discharged and exposed to the worries and anxieties of life would very shortly show all the signs of insanity as markedly as before. Hence it is necessary to keep many cases under control for a while after all their symptoms have disappeared. In such cases, then, it is very easy to say that there has been wrongful detention, and it is very hard to prove the contrary to a badly informed public. It is quite evi-

dent that a temptation exists for the proprietor of the asylum, and that the position is one which an unprincipled man might take advantage of. To some extent, abuses may be prevented by the supervision of the commissioners, but it is just in this kind of case that commissioners find it most difficult to act. They cannot keep a constant supervision over every individual patient, and it is frequently so hard, after a short examination, to say whether a patient is sane or insane that they rarely interfere in this respect. As a matter of fact, the public view of the matter is probably a greatly exaggerated one. The select committee of the House of Commons, which sat for many months two years ago to inquire into the working of the lunacy laws, paid special attention to this point; and in their report is a clause in which they say that "the committee received copious evidence which led them to the conclusion that although the present system was not wholly free from risks which might be lessened, though not wholly removed, by amendments in the existing law and practice, yet, assuming the strongest cases against the existing system were brought before them, allegations of serious abuses or of *mala fides* were not substantiated." A possible abuse of this nature is, however, a subject about which the public is easily worked into a ferment, and there are at present some few persons who have been confined as lunatics — and obviously rightly so confined — who are doing everything in their power to inflame the public mind against asylums. They have managed to get the ear of two or three influential journals, and certain of the medical journals even have written in the same sense, the result being that the owners of private asylums are beginning to fear for their very existence. The plan which is advocated by the would-be reformers is to abolish private asylums altogether; to establish public asylums for the better classes, where the charges would be only sufficient to make a fair return on the outlay; and to have these asylums brought under closer supervision than at present. It is quite certain that if this plan were adopted there would be many complaints on the part of the wealthier sections of the community. At present, the competition between private asylums being great, everything is done which can conduce to the patient's comfort, and in asylums which are intended for very wealthy persons everything is laid out on a scale of the greatest luxury, much as the patient would have enjoyed at home. Now, state institutions are proverbially less elastic than those which owe their existence to private enterprise; it is impossible to avoid a certain uniformity and routine in the manner of conducting them; and, in the case of dissatisfaction on the part of the patient or his friends, it would be less easy to remove him to another establishment. A suggestion was made in the report of the select committee that once in six months the friends of a patient should have the right to send a medical man of their own choice to examine into his state, so as to satisfy them that his detention was still requisite. The objection to this is that it is often very difficult to establish the question of sanity or insanity in a single interview, especially after residence for some time in an asylum; and it is possible that outside medical men would not unfrequently judge a patient fit to be discharged, when in reality he was far from fit to have his liberty. I may add that as investigations of this kind are in the hands of the commissioners, who have no interest either in the asylum or the patient,

they may be looked upon as wholly impartial. They, with their special knowledge, must be far better able to judge difficult points of this kind than any chance medical man. It may be necessary in the future to increase the numbers of the commissioners, or to give them more assistance in the duty of inspecting patients, and a change in this direction would be far more satisfactory than the one suggested by the committee. Another change which might be introduced would be to make two lists of the patients in each asylum: one containing the names of those who are obviously and hopelessly insane, and the other of those who are less obviously so, and who are improving. It would be in the latter group only that much supervision would be required, and those cases might be much more closely supervised than is at present possible. We may rest assured, however, that whatever may be done, and however much care may be taken to exclude the possibility of abuse, we shall still hear complaints from time to time of improper confinement. There will always be a certain number of persons who have been temporarily confined, and who on being released will raise the cry of false imprisonment.

In conclusion, I will refer to one more point, namely, the inconsiderate and not unfrequently unkind treatment which patients have to suffer at the hands of attendants in asylums. This is the greatest and most real grievance of all those which have been brought forward. Gentlemen and ladies who are accustomed to have servants about them who obey them implicitly, and are entirely subject to their will, are suddenly transferred into a position in which persons of the same rank as their own servants become in reality their masters, order them about, coerce them into doing their will, and assume a tone of familiarity which grates exceedingly on those who are quite unused to anything of the kind. The patient feels not only that he ceases to be the master, but also that he is introduced to an atmosphere which is more like that of his own kitchen than of any place that he has been accustomed to. This is one of the most knotty points in the whole question of dealing with insanity. The task of watching over the insane is one of the most disagreeable and most thankless of any in connection with the treatment of the sick. Educated persons will rarely undertake it, and thus it falls into the hands of persons of the lower orders, and these often not by any means the best samples of their class. Some authority must be committed to them, but the very exercise of this authority often induces in the patient the spirit of resistance which it was intended to subdue. Much of the stubbornness met with amongst insane patients can doubtless be traced to their disgust at being ordered about by men of the same stamp as their own grooms, and a feeling of this kind once excited must be very difficult to get rid of, and must stand greatly in the way of their progress. A lady who had been in an asylum for temporary melancholia told me that the first day after she was admitted she was a little slow in doing as she was bid, and the nurse spoke roughly to her about it. This was something she was totally unused to, and she at once resented it, and altogether refused to move, whereupon she was seized by the shoulders and pushed along. Such a thing, though very petty in itself, is intensely galling and eminently calculated to produce further trouble. I think there can be but little doubt that violence is induced in many patients in this way, who, if treated with

kindness and tact by persons of their own rank in life, would be quite tractable. This question is in reality far more important than that of the relative merits of public and private asylums, and it is one which is met with equally in all places where the insane are placed. The only solution to be found will be to induce educated men and women who are without other occupation to take up insane nursing. There are now a very considerable number of ladies who have taken up sick nursing as the business of their lives, and there seems no reason why insane nursing may not be taken up in the same way. In the case of harmless lunatics, the evil may perhaps be partly met by consigning more of them as single patients in private families, thus bringing them under the sole control of people of their own standing; but for those for whom the management of an asylum is necessary no great improvement will be effected until the problem of the attendants is solved.

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REPORTED MORTALITY FOR THE WEEK ENDING MAY 3, 1879.

Cities.	Population estimated for July, 1878.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from				
				The Principal "Zymotic" Diseases.	Pneumonia.	Scarlet Fever.	Diphtheria and Croup.	Diarrhœal Diseases.
New York	1,055,000	543	26.99	21.36	9.76	9.76	3.68	2.58
Philadelphia	—	319	—	—	7.21	2.51	3.76	3.13
Brockton	564,400	195	17.96	19.49	13.33	7.18	4.10	5.01
Chicago	—	114	—	21.84	9.65	7.90	9.65	1.87
St. Louis	—	87	—	8.05	12.64	—	3.45	1.15
Baltimore	365,000	100	14.23	12.00	10.00	5.00	4.00	—
Boston	360,000	134	19.40	8.21	10.45	1.49	1.45	.75
Cincinnati	230,000	100	18.62	34.00	12.00	25.00	5.00	—
District of Columbia ..	160,000	71	23.14	12.68	12.68	2.81	2.81	4.22
Cleveland	—	—	—	—	—	—	—	—
Pittsburgh	—	41	—	24.39	4.88	9.76	7.33	—
Milwaukee	—	37	—	10.81	10.81	—	5.41	—
Providence	101,000	37	19.69	13.51	5.49	2.70	2.70	—
New Haven	60,000	—	—	—	—	—	—	—
Charleston	57,000	23	25.61	19.71	3.57	—	—	7.14
Nashville	27,000	16	36.19	6.25	6.25	—	—	—
Lowell	53,300	18	17.60	11.11	5.55	—	—	—
Worcester	52,500	16	15.89	18.75	—	—	—	6.25
Cambridge	51,400	18	18.25	33.33	11.11	—	22.22	—
Fall River	48,500	23	24.73	21.74	—	13.04	8.52	—
Lawrence	38,200	19	25.94	21.05	19.53	5.26	15.79	—
Lyons	34,000	13	19.94	46.15	—	39.77	7.69	—
Springfield	31,500	8	13.24	25.00	12.50	25.00	—	—
New Bedford	27,000	9	17.33	—	22.22	11.11	11.11	—
Salem	26,400	11	21.73	9.09	—	—	—	—
Spartanburg	23,350	8	17.86	12.50	12.50	12.50	—	—
Cincinnati	23,000	7	17.55	14.29	14.29	—	14.29	—
Tulsa	20,200	2	5.16	—	—	—	—	—
Hartford	18,200	12	14.78	35.29	—	8.93	25.00	—
Gloucester	17,100	11	33.54	—	9.09	—	—	—
Newark	17,100	7	21.34	42.86	14.29	—	42.86	—
Haverhill	15,300	4	13.33	—	—	—	—	—
New Bedford	13,500	6	20.44	50.00	—	—	—	—
Fitchburg	12,500	7	29.20	—	14.29	—	—	—

Two thousand and twenty-three deaths were reported: 234 from the principal "zymotic" diseases, 326 from consumption, 194 from pneumonia, 133 from scarlet fever, 98 from diphtheria and croup, 68 from bronchitis, 37 from diarrhœal diseases, 25 from whooping-cough, 17 from typhoid fever, 13 from erysipelas, 13 from measles, eight from cerebro-spinal meningitis, four from malarial fever, three from remittent fever, two from intermittent fever, none from small-pox; indicating a considerably decreased mortality from all causes, pulmonary diseases, diphtheria and croup, cerebro-spinal meningitis, and erysipelas, and a decided in-

crease in scarlet fever. From *bronchitis* 29 deaths were reported in New York, 11 in Brooklyn, six in Boston, five in Cincinnati, three in Philadelphia and Holyoke, two in Chicago, Pittsburgh, Milwaukee, and Worcester, one in District of Columbia, Cambridge, and Fitchburg. From *whooping-cough*, 14 in New York, three in Brooklyn and Cincinnati, one in Philadelphia, Boston, Pittsburgh, Providence, and Cambridge. From *typhoid fever*, three in New York, two in St. Louis, one in Philadelphia, Brooklyn, Chicago, Baltimore, Boston, District of Columbia, Cincinnati, Pittsburgh, Providence, Lowell, New Bedford, and Salem. From *erysipelas*, four in New York, one in Philadelphia, Brooklyn, Chicago, St. Louis, Baltimore, District of Columbia, Milwaukee, Providence, and Lowell. From *measles*, four in New York and Pittsburgh, one in Chicago. From *cerebro-spinal meningitis*, one in Philadelphia, Chicago, Baltimore, Milwaukee, Charleston, Nashville, Lynn, and Newburyport. From *malarial fever*, four in New York. From *remittent fever*, three in Brooklyn. From *intermittent fever*, two in Brooklyn. In the nineteen cities of Massachusetts, with an estimated population of 880,950, there was a great increase in the mortality from scarlet fever; a decrease from other "zymotics" and pulmonary diseases.

The weather continued moderate and fine at the east, chilly on the lakes, cooler than usual at the south, the meteorological record for the week in Boston (latitude 42° 21', longitude 71° 4') being as follows:—

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Daily Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in Inches.
April 27	30.226	47	61	38	96	64	57	73	W	E	S	10	10	9	O	G	G	—	—
" 28	30.066	57	70	44	84	70	80	72	SE	E	SW	4	1	8	O	H	O	—	—
" 29	29.988	58	69	47	100	69	100	86	SW	W	S	5	4	5	R	F	O	—	.83
" 30	29.699	55	63	47	100	88	76	82	E	NW	O	5	14	0	R	O	F	—	.73
May 1	29.730	50	61	43	78	39	62	59	NW	W	W	10	14	12	F	F	C	—	.01
" 2	29.863	46	53	38	67	70	56	64	W	E	N	6	11	6	C	F	F	—	—
" 3	29.033	45	56	49	65	63	62	63	W	N	W	6	16	3	F	O	F	—	—
Week.	29.929	51	70	38				73	W			1226 miles.						26.30	1.57

¹ O, cloudy; C, clear; F, fair; G, fog; H, hazy; R, rain; T, threatening.

For the week ending April 12th, in 149 German cities and towns, with an estimated population of 7,410,563, the death-rate was 28.0, a decrease of 1.5 from the previous week, typhus fever showing a considerable increase, and pulmonary diseases a decline; the deaths from small-pox rose to three. Three thousand nine hundred and eighty-seven deaths were reported: 637 from consumption, 510 from acute diseases of the respiratory organs, 168 from diarrhoeal diseases, 150 from diphtheria and croup, 52 from typhoid fever, 49 from measles, 47 from whooping-cough, 44 from scarlet fever, 30 from puerperal fever, 17 from typhus fever. The death-rates ranged from 12.3 in Stettin to 48.5 in Crefeld.

For the week ending April 19th, in the 20 English cities having an estimated population of 7,383,999, the death-rate was 25.9, an increase of 1.1 from the previous week. The mortality from pulmonary diseases was still declining, although excessive; scarlet fever showed a decided increase, small-pox (in London) remaining about the same. The death-rates ranged from 14.6 in Portsmouth to 31.6 in Liverpool.

Small-pox continues fatal in India, Paris, Vienna, St. Petersburg, and Budapesth; fevers in India, St. Petersburg, Paris, and the Italian cities; diphtheria in Austria and Italy. The sanitary condition of the towns in Turkey and Russia has been very much improved, with a great diminution in the prevalence of disease. No new cases of the plague have been reported, and the governments of Europe are less stringent in their regulations with regard to it. Asia Minor has not been cleaned; typhus fever is widely prevalent there.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE HOSPITAL SERVICE. MARCH 18 TO MAY 5, 1879, INCLUSIVE.

HEBERSMITH, E., surgeon. To proceed to San Francisco and relieve Surgeon C. N. Ellinwood. April 4, 1879.

ELLINWOOD, C. N., surgeon. When relieved by Surgeon E. Hebersmith, to proceed to New York and assume charge of the service at that port. April 4, 1879.

BAILHACHE, P. H., surgeon. Detailed as a member of the National Board of Health. March 28, 1879. Directed in addition to act as president of Board of Examiners. March 29, 1879.

VANSANT, JOHN, surgeon. Detailed as member of Board of Examiners. March 29, 1879. On completion of this duty to proceed to Boston and assume charge of the service at that station. April 4, 1879.

MILLER, T. W., surgeon. Detailed as recorder Board of Examiners. March 29, 1879.

LONG, W. H., surgeon. To proceed to Chattanooga, Tenn., as inspector; on completion of this duty to rejoin his station. March 17, 1879.

MURRAY, R. D., surgeon. On expiration of leave of absence to proceed to Norfolk, Va., and relieve Surgeon Sawtelle. April 28, 1879.

SAWTELLE, H. W., surgeon. Promoted surgeon May 5, 1879, vice Hamilton, promoted.

DOERING, E. J., surgeon. Promoted surgeon May 5, 1879, to fill original vacancy.

GASSAWAY, J. M., assistant surgeon. To proceed to Portland and Astoria, Oregon, as inspector; on completion of this duty to rejoin his station. March 18, 1879.

GODFREY, JOHN, assistant surgeon. To proceed to Pensacola, Fla., as inspector; on completion of this duty to rejoin his station. April 11, 1879.

GOLDSBOROUGH, C. B., assistant surgeon. To report to the general superintendent Life Saving Service, for special duty, physical examination of surfmen. March 22, 1879. To report to Surgeon Bailhache for temporary duty at Baltimore. April 10, 1879.

WHITE, ROBERT, JR., assistant surgeon. To proceed to San Francisco, and report to Captain G. W. Bailey, commanding U. S. Rev. Str. Rush, for duty as medical officer. April 26, 1879.

KEYES, H. M., assistant surgeon. To Cincinnati to relieve Surgeon Vansant. March 31, 1879.

GLAZIER, W. C. W., assistant surgeon. To report to the general superintendent Life Saving Service, for special duty, physical examination of surfmen. March 22, 1879.

The following candidates, having passed the required examination, were appointed assistant surgeons, May 5, 1879: CHARLES L. DANA, of New York, assigned to temporary duty at New York city. HENRY P. COOKE, of Virginia, to report for assignment to Surgeon Hutton, New Orleans. H. R. CARTER, of Maryland, to report to Surgeon Vansant, Boston, for temporary duty. WILLIAM H. HEATH, of Pennsylvania, assigned to temporary duty in the office of the surgeon general, Washington, D. C.

THE MASSACHUSETTS MEDICAL SOCIETY will meet in Horticultural Hall, 110 Tremont Street, on Tuesday, June 10, 1879, at ten o'clock, A. M. The following is a list of the papers to be read:—

- I. The Physician's True Position in Society. By Rollin C. Ward, M. D., of Northfield.
- II. Cases of Insanity following Acute Diseases. By James B. Ayer, M. D., of Boston.
- III. Intestinal Catarrh of Infants. By George K. Sabine, M. D., of Brookline.
- IV. The Trials and Triumphs of the Country Doctor. By Benjamin D. Gifford, M. D., of South Chatham.
- V. Insane Drunkards. By Theodore W. Fisher, M. D., of Boston.
- VI. Some Diseases of the Eye requiring Immediate Treatment. By Charles H. Williams, M. D., of Boston.

The programme for Tuesday afternoon is as follows: At three o'clock, the following papers will be read by members of the Massachusetts Medico-Legal Society:—

- I. A Digest of "Returns" from Members of the Society for Year ending December 31, 1878. By the Corresponding Secretary, Medical Examiner F. Winsor, M. D.
- II. Duties of Officers under the Present Law of Medical Examiners, and the Relations of the Community thereto. By Associate Member Hon. Asa French.
- III. Report of a Committee on Ex-

pert Testimony: What it is, and what it should be. IV. Report of a Committee on the Use of the Metric System of Weights and Measures in Forensic Medicine. V. A Medico-Legal Case of Abortion followed by Conviction. By Medical Examiner J. C. Gleason, M.D. VI. On Pathological Changes in Pyæmia and Septicæmia. By Associate Member E. G. Cutler, M.D. VII. Evidences of Abortion derived from Clinical and Post-Mortem Teaching. By Medical Examiner C. C. Tower, M.D. VIII. On Death by Lightning. By Medical Examiner J. L. Sullivan, M.D.

During the afternoon the Warren Museum at the Medical College, North Grove Street, the Warren Museum of Natural History, 92 Chestnut Street, the Children's Hospital, 1429 Washington Street, and the Museum of the Natural History Society, Berkeley Street, will be open to the Society.

The Annual Discourse will be delivered on Wednesday at twelve o'clock by Dr. George W. Garland, of Lawrence. The annual dinner will be served in the Music Hall at one o'clock. Dr. Christopher C. Holmes is the anniversary chairman.

In the Lower Horticultural Hall there will be an exhibition of surgical instruments and various pharmaceutical preparations.

The annual meeting of the councilors will be held at the Medical Library, 19 Boylston Place, on Tuesday, June 10th, at seven P. M.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.—A regular meeting will be held on Monday evening next, May 19th, at eight o'clock, in the hall of the Medical Library Association, 19 Boylston Place. Reader, Dr. Beach. Subject, Surgical Cases.

FREDERICK C. SHATTUCK, *Secretary*.

ESSEX NORTH DISTRICT MEDICAL SOCIETY.—The annual meeting of this society was held on Wednesday, at the Eagle House, Haverhill. There was a large attendance of members from the neighboring towns and cities, and the meeting was unusually interesting. The committee on nominations reported the following list of officers for the ensuing year, which report was unanimously adopted: President, Dr. W. H. Kimball, of Andover; Vice-President, Dr. John Crowell, of Haverhill; Secretary and Treasurer, Dr. George W. Snow, of Newburyport; Librarian, Dr. Sidney Drinkwater, of Haverhill; Commissioner on Trials, Dr. S. K. Towle, of Haverhill; Corresponding Secretary, Dr. E. P. Hurd, of Newburyport; Nominating Committee for State Society, Dr. C. G. Carleton, Lawrence; Councilors, Drs. David Dana, C. G. Carleton, R. B. Root, Geo. W. Snow, J. C. Howe, S. K. Towle, Wm. Cogswell, I. A. Douglass; Censors, Drs. E. P. Hurd, C. D. Hunking, Geo. W. Garland, Michael Roberts, O. F. Seavey. A valuable and scholarly paper was presented by Dr. Hurd on Animal Heat and Fever. The paper presented a fine *résumé* of the recent literature on the subject, and the reading, which occupied about an hour, was listened to with unusual interest. The essay was followed by a lively discussion, which was participated in by most of the members present. At two o'clock the members of the society sat down to a good dinner.

UNITED STATES MARINE HOSPITAL SERVICE.—The following gentlemen, having passed the examination required by the regulations governing the marine hospital service, have been appointed assistant surgeons in that service by the secretary of the treasury: Drs. Charles L. Dana, H. P. Cooke, H. R. Carter, and W. H. Heath. Assistant Surgeon Charles L. Dana ordered to New York city, Assistant Surgeon W. H. Heath to Washington, D. C., and H. R. Carter to Boston, Mass., for temporary duty. Assistant Surgeon H. P. Cooke ordered to New Orleans, La.

BOOKS AND PAMPHLETS RECEIVED.—Hints in the Obstetric Procedure. By William B. Atkinson, A. M., M.D. Philadelphia: D. G. Brinton. 1879.

Opium as a Tonic and Alterative, and its Hypodermic Use in the Debility and Amaurosis sometimes consequent upon Onanism. By B. A. Pope, M.D. (Reprint from the New Orleans Medical and Surgical Journal, February, 1879.)

Circulars of Information of the Bureau of Education. No. 1. 1879.

Training Schools for Nurses. Washington: Government Printing Office. 1879.

Tenth Annual Report of the State Board of Health of Massachusetts. January, 1879. Boston: Rand, Avery & Co.

Transactions of the Detroit Medical and Library Association. April, 1879.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. C. — THURSDAY, MAY 22, 1879. — NO. 21.

TYPHOID FEVER: ITS CAUSES AND SOURCES, AS EX- PLAINED BY THE GERM THEORY OF DISEASE.

BY ALEXANDER R. BUCKER, M. D., OF BERKELEY, CALIFORNIA,
Fellow of the California State Medical Society, etc.

SOURCES.

HAVING thus briefly traced the contagium — which is *the cause* of typhoid fever — and its *modus operandi*, let us now inquire into its sources and methods of dissemination.

We have spoken of the contagium as a specific germ. By this we did *not* mean that there is one disease-germ, which, under varying circumstances, may produce different diseases of this group; on the contrary, we mean that each of the contagious diseases has its own specific contagium, which, under favorable conditions, will reproduce that same disease, but which cannot, under any circumstances, cause any other disease. We therefore believe that every case might be traced to a previous case, *if* all the circumstances could be known; and we do *not* believe in the occurrence of cases *de novo*, because the weight of evidence is decidedly opposed to the theory of spontaneous generation.

“The epidemics which spread havoc among us, from time to time, are not spontaneously generated; but they arise from an ancestral stock, whose habitat is the human body itself. It is not on bad air or foul drains that the attention of the physician will primarily be fixed; but upon disease-germs, which no bad air or foul drains can create, but which may be pushed by foul air into virulent energy of reproduction.”

Here we have two points of the greatest importance noted. Our attention must primarily be fixed upon the “disease-germs, which no bad air or foul drains can create,” any more than they could create vultures; but we must not therefore neglect the insanitary conditions, because the bad air will debilitate the system, and render it less able to withstand an attack of disease, while foul drains may be the direct

¹ Quoted from page 377.

² Professor John Tyndall, in British Medical Journal, June 14, 1874, page 621.

means of conveying the disease-germ to a susceptible system ; and this may be accomplished in one of two ways, — the first of which pertains especially to city life, while the second imperils both city and country folk. In our large cities we have sewers, with which are connected our wash-basins, bath-tubs, water-closets, and kitchen-sinks. They thus receive an enormous amount of animal and vegetable matter, which, unless very speedily removed, will be liable to decomposition, with its resultant gases. They also receive the water which has been used to wash the persons and clothing of patients suffering from measles, scarlet fever, and the like, the sputa of diphtheritic cases, and the dejections of those suffering from typhoid fever. If, therefore, the sewer becomes, in any way, choked, so as to allow of the formation and accumulation of the gases resulting from decomposition, these gases naturally seek to rise, and find their easiest outlet through insufficient traps, into our kitchen-sinks, water-closets, bath-tubs, and wash-basins ; and it is probably in this way that disease-germs do, in some cases, find their way to susceptible systems. We believe, however, that this danger has been greatly overestimated, and that many cases which are apparently well traced to such a source should be credited to a very different one.

In a painstaking and able report on two epidemics of typhoid fever, in Crosshill and Eaglesham, suburbs of Glasgow, Scotland, in 1875, Eben. Duncan, M. D., repeatedly points out the fact that the occurrence of the disease did *not* coincide with insanitary conditions. For instance : “ Here were all the conditions which would most certainly have originated a terrible outbreak of fever, had sewer gases been at this time capable of producing it. Sewer gases admitted freely on the surface of the drinking-water, sewer gases in the houses, choked and filthy privies on the common stairs, — what was the result ? In tenement A, occupied by eight families, only one of these families was affected ; in tenements B, C, D, and E, lived thirty families, among whom not a single case of the fever had occurred ; in tenement F, one case occurred : in tenement G, two families were affected ; in tenement H, no case occurred. Further, the cases which did occur occurred, as will afterwards be shown, not from sewer-gas poisoning, but from a different cause.”

See, also, the very striking and important report on Diphtheria, — which is of course apropos here, as diphtheria belongs to this group of diseases, — in the Fifth Annual Report of the Board of Health of the City of Boston, dated April 30, 1877. We here find recorded a series of observations covering two years, during which there was “ an unusual and destructive prevalence of diphtheria,” resulting in “ 1064 deaths,” which was “ at the rate of 30.16 in every 10,000 of the population of the city, at all ages.” Under the heading Local Distribution we find the following pertinent remarks : —

"Diphtheria is fatal in a tolerably uniform ratio of the number of cases attacked; that is to say, epidemics do not vary very widely in their intensity and destructiveness, so that statistics of death from this cause are a fair index of the inroads of the disease upon the public health. It is further obvious that facts pertaining to the local distribution of diphtheria are of especial interest in explaining and illustrating ætiological theories. If, for example, contagiousness is the essential characteristic of this disease, we shall find the deaths distributed quite generally, without regard to special local conditions. If, on the other hand, the disease depends for its origin and spread upon insanitary social and soil relations, we shall see epidemics shunning healthful localities, and always at home in ill-drained, sewage-sodden, miasmatic regions, inhabited by an unwholesome, overcrowded, improvident population. Now, what testimony has Boston to offer on these points, gathered from the experience of the last two years?"

Here comes a table, showing the mortality rates per 10,000 for each of the nineteen districts into which the city is divided, which can be intelligible only to those intimately acquainted with the topography of Boston. Then follows immediately: "These district mortality-rates do not present such distinctive characters as the believer in uncleanness as a cause of diphtheria would like to see. For example, the greatest number of deaths, in proportion to population, occurred in the upper part of East Boston, a section not specially characterized by unwholesome local or social conditions; much of the territory is high land, well drained, and occupied by a thrifty class of people. Then, again, District XIX. (Brighton), rural in character, sparsely settled, and presenting many attractive and apparently salubrious features, had a diphtheria death-rate considerably in excess of that of the city at large. On the other hand, we find that at the 'North End' (District IV.), a section whose name has, for many years, been synonymous with bad material and moral conditions, the inhabitants were blessed with comparative immunity from the inroads of diphtheria, although the death-rate from croup was excessive. But the next adjacent section of territory (District V.) is a surprising exception; this is the region around Haymarket Square, a locality formerly occupied by a mill-pond, but at present inhabited, upon the poorly sewered filled land which has taken the place of the mill-pond, by a people of the poorer class, crowded in tenement blocks. In this insalubrious territory, presenting, in its filth and in its compact population, just the conditions for the spread of a miasmatic-infectious epidemic, the death-rate from diphtheria was lower than in any other portion of the city,—an anomaly most difficult to explain."

"These results, it must be confessed, are a surprise, and, in some respects, a disappointment. The ætiology of diphtheria would be mu-

clearer if we found the disease always most abundantly disseminated in localities well adapted for the germination and spread of the miasmatic and infectious group of diseases. We are compelled to admit that it has not been so found in this invasion."

Anticipating, however, that the objection might be made "that considerable territorial areas may present quite uniform and satisfactory sanitary characters as a whole, while individual dwellings in those sections may have exactly the unwholesome qualities upon which stress is laid," the writer goes on to show that "a careful examination was made of every dwelling in which a death from diphtheria or croup had occurred," by an inspector who "was especially chosen for his fitness for the work, for his close observation, and keen and accurate detection of imperfections in dwelling-house hygiene." The results of this inspection are thus summarized:—

"It thus appears, under the head of diphtheria, that nearly one half the premises inspected (forty-seven per cent.) presented nothing objectionable in point of drainage and general cleanliness; in thirty-nine per cent. the drainage was defective; in the small proportion of three per cent. the yards and cellars were dirty; and in the remaining eleven per cent. sunken lots, stagnant water, or filthy dumps made the surroundings open to objection. The summary for croup makes a still more favorable exhibition. It is, then, our duty, in view of the concurrent testimony, to reject the idea that filth fosters the origin and dissemination of diphtheria."

These observations, emanating from so careful and reliable a source, and extending over a period of two years, are very significant, especially when we note the almost pathetic tone of disappointment in which the writer states the results to which he has been forced. During this time, diphtheria prevailed to an unusual degree within the city limits; and yet "less in the 'South Cove District' than in Brighton, less in the 'Old Mill-Pond District' than on Beacon Hill, and less at the 'North End' than at West Roxbury." If it were not for the careful house-to-house inspection by an expert whom the Board so heartily indorses, some comfort might be derived by a belief in the faulty plumbing and trapping of the better class of houses. But even that satisfaction is denied to the believer in the filth origin of these diseases. In fact, that theory is utterly incompetent to explain the condition of things presented in this report.

Sewer gas, then, is not so black a devil as it has been painted. It is foul, noxious, a thing to be avoided and fought against; but it is not guilty of *all* the crimes that have been charged against it. But where is the culprit? Let us glance at our country cousins.

Typhoid fever has long been recognized as especially a disease of the country; and this will not seem surprising, when we remember the

utter carelessness with which privies, drains, and manure-heaps are located with reference to wells and water-courses. Even these filthy leachings cannot, of course, originate the disease, unless they contain the specific contagia. But if the dejections from a typhoid-fever patient are deposited in a privy, or on a manure-heap, which is so placed that leaching may occur into the well, or brook, or river, it is impossible to say how far those contagia may travel before they find their way to an appropriate nidus, and light up what may appear to be an original case.

Moreover, we know that a large proportion of the farmers, situated within a radius of fifty or even a hundred miles of our large cities, look upon the sale of milk as a more or less considerable portion of their business; and that the city milk supply is daily gathered from hundreds of farms along the lines of railroad there centring. If, then, the water supply of even one of these farms should become contaminated by the dejections of a single case of typhoid fever, the contagia would be conveyed to just so many people as drank the milk coming from that farm. Nor, in saying this, do we necessarily accuse the farmer of watering his milk; for the mere washing of the pans and cans with such water would be quite sufficient. And we must remember that the contagia would naturally be attracted by a fluid so rich in nitrogen and water.

When we thus comprehend how hundreds of city people may be exposed to either one of the diseases of this group by the occurrence of a single case fifty miles away in the country; when we remember the yearly prevalence of these diseases through the country districts, and the usually complete ignorance of the city consumer in regard to the original source of his milk supply, we must stand appalled at the dangers to which we are continually exposed in the consumption of this most important and seemingly innocent article of food. And we *may* come to believe that milk may be even more dangerous than sewer gas. That this is not the fearful imagining of mere theory, but plain and terrible truth, we will now prove by observed and recorded facts.

This subject has not, so far as we can learn, received the attention it deserves in this country. But in England several epidemics have been directly traced to the milk supply. From the appendix to Dr. Duncan's very valuable report I take the following particulars:—

“In September, 1857, a domestic servant, suffering from typhoid fever, was brought home from Liverpool to her parents in Penrith, who kept two or three cows, and retailed the milk to fourteen families in the town. Seven of these families took the disease. No case of the fever had happened in Penrith for some months before this girl's arrival.”

In 1870, an epidemic of typhoid prevailed in a small district of Isling-

ton. "One hundred and forty-two families were supplied by a particular dairyman, and seventy of these families were invaded by typhoid within ten weeks. . . . Suspicion rested on a fouled water-tank, the water of which was used for washing the milk-cans. The family of the dairy-man, *who died of the disease*, denied that water had ever been used for diluting the milk. . . . We have yet left the admitted fact that the cans were washed at the pump."

In 1872, an epidemic occurred in Armley, in the borough of Leeds. It was reported on by Dr. Ballard, who traced it to the milk supply of a particular dairy, in which the dairyman himself was lying ill with typhoid fever, and where two of his children also suffered from the same disease. One hundred and seven cases occurred in this epidemic, which suddenly ceased on July 27th. The following is an extract from Dr. Ballard's report:¹ "This sudden cessation of the fever epidemic among this section of the community on July 27th means that the cause of the epidemic had ceased, for them, a fortnight or more previously: since in enteric fever there are commonly eleven days of incubation, and several other days before medical advice for its symptoms is sought, July 10th would therefore be about the time when the cause of the epidemic among customers of the dairy suddenly ceased to operate. Now, on July 10th Dr. Robinson had the handle of the pump at the Hall Lane Dairy chained up, and thenceforth it was kept chained. There was coincidence, therefore, between the cessation of the fever and the cessation of the opportunity that the dairy had to supply a particular water, while there was no suggestion that the cows or their milk had undergone any change. . . . The dairyman's house is one of three cottages. The well is sunk (close to end wall) to a depth of thirty-six feet, in the porous shale of the district. On removing stone cover, the depth of water was found to be twelve feet. A large dung-pit, full of manure, was situated about five yards off, and a privy and sunken tub for urine a few yards off in another direction." The well was found to be foul.

Another epidemic occurred in Leeds in 1872, which was reported by Dr. Robinson.² He says: "A farm-house in the country became infected with typhoid fever towards the latter end of September; the head of the house died, and subsequently five members of the household suffered from the disease. Milk from this infected source, purchased by a Leeds dairyman, was supplied to a certain respectable district of the town, in which locality a virulent outbreak of typhoid manifested itself, and eighty persons who obtained their milk from this dairyman contracted fever, fourteen of whom died."

In 1873, an epidemic occurred at Parkhead, Glasgow, and was re-

¹ Official Report upon an Outbreak of Enteric Fever at Armley, Leeds, 1873.

² Report on Sanitary Condition of Leeds, 1872.

ported by Dr. Russell.¹ He says: "Of seventy-three families supplied by a particular dairyman, who had three children suffering from typhoid, twenty-two had fever."

At Bolton, forty-seven out of fifty families, supplied by the same dairyman, were smitten with typhoid fever. The brook which supplied that dairy with water was found to have been contaminated, higher up, by the dejections of a typhoid patient.²

In 1875 occurred the epidemics in Crosshill and Eaglesham, reported by Dr. Duncan, in which he very clearly and distinctly traces the infection to the milk supply. We have quoted from him (page 698) to show that cases did not arise from sewer gas; and he there promises to show us that such cases as did occur, in those crowded and sewer-gas-filled tenements, arose from another cause. See what further he has to say about them: "Of the total number of fifty-nine families living in these eight tenements, four families had fever; and these four families got their milk supply from the three Eaglesham dairies [which he has shown to have been contaminated], and in every case almost entirely from that source."

When we arrive at a full comprehension of this source of typhoid fever, our first feeling is one of dismay at the difficulties to be encountered in tracing the epidemics of large cities, and still more in securing efficient preventive measures; but our second feeling is one of relief, in the fact that we have at last discovered a principal source of this insidious group of diseases, and thus know where we must direct our energies. Prevention, to be effective, must be radical. There is at present no known way of destroying contagia in such a fluid as milk, except by the prolonged exposure of such fluid to a very high temperature. Ordinary boiling is quite insufficient for the purpose. Real prevention could be secured only by legislative enactment forbidding the sale of milk, in either large or small quantities, without a license, which license should be obtainable only after thorough inspection of the premises by an officer appointed for this duty by the State Board of Health; and these licenses should be good for one year only, and should be renewed only after renewed inspection. With a sufficient number of competent and faithful officers assigned to this duty, there is no reason why our milk supply should be contaminated by these germs, and so one most important source of contagion would be removed.

We fully appreciate the enormous difficulties in the way of securing such legislation, on account of the ignorance and apathy of the legislators and of the powerful opposition which would be brought to bear by the dairy interest. But if the people could be made to see

¹ Glasgow Medical Journal, August, 1873.

² Dr. John Dougall, Glasgow Medical Journal, May, 1873.

(1) the enormous death-rate from the contagious fevers, (2) the great danger of drinking milk containing contagia, and (3) the strong probability of such contamination of their milk supply, owing to the ignorance and carelessness of dairymen, public opinion would soon demand the passage and strict enforcement of such preventive measures.

But in the mean time we must individually do what we can — by the disinfection of stools at the moment of passage, the early disinfection of soiled clothing, and the most careful inspection of the water and milk supply — to reduce the chances of contagion. And here is opened up a grand field for labor for our country brethren. Let them each and all carefully inspect the dairy farms in their respective neighborhoods; advise with the farmers in regard to the sanitary conditions of their premises; and, on the occurrence of disease, promptly notify their own patients, and also their brethren in the city or town to which the milk from that farm is supplied. By such a course they could effectually prevent a large proportion of the epidemics which now scourge our cities year after year, avert an incalculable amount of anxiety and sorrow, and rob grim death of many a victim.

GENERAL PARESIS.¹

BY IRA RUSSELL, M. D., OF WINCHENDON.

GENERAL paresis was not known as a distinct disease until described by Esquirol in 1822, who gave a lucid account of its symptoms, and pointed out its incurable nature. At about the same time Bayle noted that the mental and motor symptoms were synchronous, and they were attributed by him to a chronic inflammation of the arachnoid. In 1826 M. Calmeil gave a complete account of it, and to him is accredited the merit of having been the discoverer. It is a remarkable fact that his pathology is in accordance with the results of modern research. All writers upon this disease consider it the most fatal form of insanity, destroying as it does, in a short time, the mind and life of all attacked by it. It is a disease of middle life, more common in males than in females, the proportion being as eight to one. Childhood and old age are exempt. Seldom is there a case seen where the patient is younger than thirty or older than sixty. The average age at which patients are attacked is about forty-four. The disease is more common in densely populated communities than in the rural districts. Its frequency seems to be influenced by our higher forms of civilization, although the high and the low, the rich and the poor, the learned and the unlearned are subject to it, but more frequently the healthy, active, well-to-do men engaged in business enterprises requiring great and persistent men-

¹ Read before the Worcester North District Medical Society.

tal strain, with irregular habits and loss of sleep. For a considerable period of time the disease has been common in England and on the continent of Europe, and more rare in the United States, but few cases having been observed in our Southern and Western States. Dr. Compton, of Mississippi, who has had large experience among the insane in the Southern States, informs me that he has never seen or known of a case of general paresis among the negroes.

For convenience the disease may be divided into three stages, both of the psychical and motor symptoms: First, *psychical* symptoms. During the first stage the patient exhibits oddities, eccentricities, peculiar mental manifestations, restlessness, and irritability of temper. As the disease advances into the second stage there is an exaltation of ideas; the patient imagines that he is possessed of unbounded wealth, or power, or influence. He can manage all the banks in the country, or the railroads, and owns all the steamships on the ocean. At the same time his friends will observe loss of memory, and an increase of irritability of temper, and occasional attacks of maniacal excitement with epileptiform seizures. He loses self-control, especially in regard to trivial and social observances. And then, in regard to general conduct, his behavior towards those with whom he associates becomes strange, and he exhibits unusual likes and dislikes in his own family. If a man of business, he falsifies his word, and resorts to tricks and meanness, quite different from his usual methods, committing little acts of dishonesty, and perhaps theft. His maniacal attacks and epileptiform seizures are more and more frequent; he will have delusions, and his mind will become completely deranged. He is unwilling to submit to the least constraint, flies into furious paroxysms of temper, and assaults his nearest and best friends without provocation. The higher controlling faculties of the mind are in abeyance, and the lower instincts are brought into a state of activity. His conversation becomes lewd, and his conduct towards women indecent. During all this time the patient regards himself as perfectly well, and will not for a moment admit that there is anything the matter with him. This condition of mind gradually subsides, and he passes into the third stage, a good-natured or demented condition, and after a longer or shorter period becomes indifferent and oblivious to everything going on around him.

This state of dementia may last for many months, the patient being in a state of complete idiocy. The above is a brief outline of the psychical symptoms generally observed in this fatal disease. The motor symptoms are as follows: First stage. Among the earliest symptoms will be observed an irregular shape of the pupils of the eyes and a persistent contraction of the occipito-frontalis muscle, causing the eyes to be widely opened, the forehead wrinkled, giving an exalted, pleased expression to the face. The tongue is protruded with some difficulty, has

a tremulous or fibrillar movement, and is suddenly withdrawn. There is twitching of the nostrils and upper lip, with frequent tremors of the latter; the voice is slightly altered, and there is a thickness of speech reminding one of a person partially intoxicated. The hands lose their coördinating power, and a marked difference is observed in the handwriting. There is an alteration in the gait, a peculiar hitch or shuffle easily recognized after having been once observed. These symptoms become more and more marked as the patient advances into the second stage, when he easily loses his balance and falls down. As he advances into the third stage he becomes more and more helpless: he is unable to feed himself, stand, or walk, and finally has complete paralysis of his arms and legs; all control over the sphincters is lost, and he becomes an object of pity and disgust. The above are the usual and more common psychical and motor symptoms observed in this fatal disease. Individual cases may have unimportant variations, though no one familiar with general paresis would be likely to make a mistake in diagnosis.

Etiology. — Heredity is supposed to have but little influence as a producing cause in this form of insanity. The most common causes assigned are intemperate use of alcoholic stimulants, lewdness, and excess of brain work. It is probable that lewdness has been overestimated as a cause, for the reason that nearly all paretics, during the course of the disease, manifest erotic desires, symptoms due to the disease rather than the cause of it. There is no doubt that intense and long-continued mental application, combined with an irritable nervous temperament, and loss of sleep are the most common exciting causes.

Pathology. — Much has been written upon the pathology of general paresis, and a great variety of opinions have prevailed in regard to it. It is a notable fact, however, that the early writers, Esquirol and Calmeil, are in accord with the more modern observers, namely, that the disease is essentially a chronic inflammation of the membranes and cortex of the frontal part of the brain. At the last meeting of the American Medical Association, at Buffalo, Dr. Kempster, of Oshkosh, Wisconsin, read a long and able paper upon general paresis, giving the morbid appearances observed in thirty-five autopsies of patients dying from it. Dr. J. Crichton Browne, of the West Riding Asylum, England, has given a great deal of attention to the pathology of this disease, and his observations agree with those of Dr. Kempster. The constant lesion found has been a thickening of the pia mater, and adhesions of the same in spots to the apices of the convolutions of the anterior lobes of the cerebrum; so that when the brain has been hardened in a solution of nitric acid, one part of the acid to eight parts of water, the pia mater will show the points of adhesion, and when removed will tear some of the brain substance with it at the points of adhesion. The adhesions

are on the summits of the convolutions, which are flattened and hardened, the adhesions never extending into the sulci.

The cortex shows signs of inflammation, and sometimes there is a fatty degeneration of the deeper portions. Both Drs. Kempster and Browne have been impressed by the evidence afforded by the post-mortem examinations of the truth of the localization of the functions of the brain, as taught by Ferrier and others. The disease commences in the anterior and parietal portions of the cerebrum, and progresses from before backward, and many of the psychical and motor symptoms seem to correspond with the supposed mental and motor centres as these centres become affected by the progress of the disease. I will observe further that a French writer, Dr. Lionet, in summing up his conclusions in a recent work on general paresis, says that this disease most generally has an individual origin without hereditary predisposition, lasting from two to four years. When a hereditary predisposition exists, it presents itself under one of two forms, the congestive or the vesanic. The congestive will have remissions, while the vesanic are insane from the beginning.

Prognosis. — The disease is always fatal. When of individual origin it lasts on an average about three years. When of the congestive form, with remissions, somewhat longer. Patients suffering from this form have seasons of apparent improvement, and after having been sent to an asylum in a maniacal condition, and remaining a while, great improvement is observed, and friends are encouraged to hope for a final recovery. Sometimes, even, the patient resumes business, and appears quite well, but sooner or later breaks down again, with all his symptoms greatly aggravated. The vesanic form, according to the French writer above referred to, has no remissions, but lasts longer than either of the other forms mentioned.

Treatment. — But little can be said about treatment. Nothing has been discovered that seems to exert any controlling power in arresting this disease. It is not usually recognized until it has existed for a considerable time, and when it has passed the curable stage, if there is such a stage; but much can be done to mitigate the symptoms as they appear. The patient should be allowed all the freedom compatible with safety to himself and others: his surroundings should be as pleasant as it is possible to make them; his diet should be nutritious; and, if necessary to procure sleep, anodynes should be administered, consisting of chloral hydrate, hyoscyamus, and meconiate of morphia, in combination, in small doses. The calabar bean, or some of its preparations, may be used to control excitement, especially of the erotic kind.

THE METRIC SYSTEM IN MEDICINE.¹

BY EDWARD SEGUIN, M. D.

MR. PRESIDENT AND CONFRERES, — I told you at our last meeting that the International Medical Congress of Geneva, acting upon the proposition of the American delegates, had appointed a commission to report at the International Medical Congress of Amsterdam upon the possible progress of uniformity in medicine and pharmacy, — each commissary having to report for his nation. Now I ask you what shall be our share in this report ?

[The preliminary step towards international uniformity in medicine and pharmacy is the adoption of the international metric system, now accepted by all nations except two, this country and England.]

(a.) In this country, the metric agitation has been kept up by several publications, distributions of metres in all their forms, the action of metric bureaus and medical organizations: and the metric conversions of the last two years are too many to be all reported.

(b.) The metric system has been applied to all the branches of the U. S. Marine Hospital service, and has worked well from the start, a year ago.

(b.) The officers in charge of the vital statistics of New York, Boston, and other large cities use the metric system, and complain of being obliged to convert into metric figures the fantastic weights and measures of the documents emanating from our profession.

(b.) The Medical Society of the State of Pennsylvania at its session of June, 1878, passed resolutions urging the use of the metric system upon its members, by the county societies, and that it be taught in the public schools.

(c.) The Delaware County Medical Society voted the same resolutions, including the one relating to the public schools.

(c.) The Medical Society of the State of Massachusetts was the first of all, I believe, to accept the metric system.

(f.) The Rhode Island State Medical Society has voted the same, to take effect January, 1880.

(g.) The Medical Society of the State of New York "requests of those who present papers at its future meetings that the metric system be employed in their communications, and that this system be exclusively used in the public proceedings of this society." (February 6, 1879.)

(h.) The Medical Society of the County of New York resolved (March 24, 1879), that "the metric system shall henceforth be used in the minutes of this society, and in all the papers published under its authority."

¹ Adopted by the American Medical Association, May 8, 1879, at Atlanta, Ga.

(*i.*) The Medical Society of King's County, after hearing a paper of Dr. Edward Seguin on the use of the metric system in medicine, and the necessity of organizing a metric league, "appointed [March 18, 1879] a committee to consider these recommendations and report."

(*j.*) The Georgia Medical Society of Savannah "takes pleasure in giving their moral support to the adoption of the metric system by the American Medical Association, and will put this system in practice in their city" (Savannah, April 23, 1879).

(*k.*) I can recite the text of forty similar adhesions to the use of the metric system in medicine, but prefer to close these quotations by the terse expression of Dr. F. Morse, Secretary of the Kansas Medical Society: "We approve of the metric system, but we wait for the example of other States." This sentence contains in its kernel all the "internal" question of weights and measures.

As for the "foreign" or, better, "international" question: (2.) On one hand the invitation of the International Medical Congress to join the other nations in a plan of "uniformity, medical and metric," is a precious opportunity to do willingly what we shall have to do soon on moral compulsion.

(*b.*) On another hand, England, whose stubbornness is partly responsible for our own supineness in this matter, begins to shake herself up.

(*c.*) The *London Lancet* of November 23, 1878, gives a formal adhesion to the use of the metric system in medicine; and in its issue of February 1, 1879, expatiates on "the very great boon which would accrue to the medical profession by the introduction of metric weights and measures, and by the abandonment of the grotesque and obsolete system which is now in vogue."

(3.) And the talented editor of the *British Medical Journal* wrote to me (February 4, 1879, London): "I hope I may be able to excite sufficient interest in the subject here to bring about practical measures. I shall be aided by your progress, and be glad to hear details. Shall you come to our Cork meeting, to bring tidings of metric progress?"

The significance of this letter resides in the fact that the *British Medical Journal* is the organ of the British Medical Association.

[Altogether, these public and private documents are warnings to the American Medical Association to accept the metric system before the next meeting of the British Medical Association; no nobler rivalry than this being possible between England and this republic. Considering that foremost in human interest is the uniformity of weights in prescriptions, which would prevent the grave or fatal results attending the composition abroad of medicine prescribed here, and the uniformity of measures, which would give the possibility of writing observations uniform—that is to say, comparable at sight—with those of

other nations; then considering the possibility of mathematically accounting for the vital functions intrusted to the physician, in health at first, during their waste in disease, and in the course of their recuperation under treatment, and to make these individual records serve as mathematical elements of true medical statistics; considering also — from a domestic point of view — that it is the duty of this association to lessen and shorten the dangers inherent to the transition from one system of measures and weights to another, and that it will be highly creditable for this association to have brought to bear all its latent force on such an important issue, I submit to you the following resolutions: —

Resolved, (1.) That the American Medical Association adopts the international metric system, and will use it in its transactions.

(2.) Requests that those who present papers at its future meetings employ this system in their communications, or reprints thereof.

(3.) Requests the medical boards of the hospitals and dispensaries to adopt the metric system in prescribing and recording cases; and that the faculties of the medical and pharmaceutic schools adopt it in their didactic, clinical, or dispensing departments.

(4.) Requests the physicians familiar with the metric system to help their confreres and the druggists in its application; and the delegates present at this session, to work up the acceptance of the metric system by their respective county and state societies.

(5.) Requests our president to name a Metric Executive Committee, of which he shall be the ex-officio chairman, and whose task shall be to give unity and rapidity to this metric movement.



RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.

BY R. H. FITZ, M. D.

PATHOLOGY.

Transmission of Erysipelas. — Mr. Barker¹ refers briefly to the contents of a brochure by Tillmans, in which are contained the results of his experiments concerning the nature of the erysipelatous process, and the conclusions drawn from these experiments.

In the attempt to inform himself as to the possibility of conveying erysipelas by inoculation from a diseased to a healthy individual, twenty-five inoculations were made. In three instances animals were successfully inoculated with erysipelas from the human subject, and in two cases animals were infected from other animals. He consequently believes "that erysipelas is inoculable in rare cases, and that fluids from

¹ London Medical Record, March 15, 1879, page 21.

an erysipelatous part display a specific contagious action." He also believes that inoculation of the human subject is possible.

When a 2.4 per cent. solution of carbolic acid was added to virus, portions of which had been successfully inoculated in certain cases, no effect followed its inoculation in four instances. When various morbid substances, not taken from erysipelatous parts, were inoculated, no erysipelas resulted, although some of them were of extreme putridity. Death resulted, however, in certain instances from evident septicaemia.

In the attempt to determine the relation of bacteria to erysipelas it was found that they were present in certain cases, though not in all, and it was consequently inferred that the extension of the disease may take place independently of their presence.

Typhoid Fever from Diseased Meat. — The occurrence of an epidemic of typhoid fever at Kloten calls attention to a novel factor in the origin of this disease. Although a detailed account of the epidemic is eventually to appear, Walder,¹ who had personal charge of a large number of the cases, gives a summary of the principal points obtained from his investigations.

The occasion was a musical festival, at which were about seven hundred participants, and of these nearly five hundred fell sick. The general course of the disease and the nature of the anatomical lesions in the fatal cases examined were such as to characterize the epidemic as one of typhoid fever. It was thought that meat was the infecting material, from the fact that for many years no case of typhoid fever had occurred within the neighborhood, with the exception of one, which, though existing at the time of the sudden and general outbreak of the disease, took place at a distance from the seat of the festival. The water, of which but little was drunk, and that generally mixed with wine, came from a remote part of the village, and was conducted from a height through an iron pipe. Although the greater part of the meat was certified to as coming from healthy animals, forty-three pounds of veal from a single calf only a few days old were brought from a separate locality. It was ascertained that this animal was sick at the time it was slaughtered. The lungs and brain were sold to other persons than the one who furnished the dinner for the festival, and it was learned that the lungs looked in spots like a spleen, and that the three persons for whom the lungs were cooked fell sick, and presented similar symptoms to those manifested by the diseased sharers in the festival. The brain was sold with others to a distinct family, and it was noticed that one of the brains was of a dark blue color, of a bad smell, and was therefore not used. The other brains were cooked and eaten, and like symptoms to those above referred to occurred in members of this family. From an inquiry into the distribution of meat from the butcher's

¹ Berliner klinische Wochenschrift, 1878, xxxix., xl.

shop on the day before and the day of the festival, it was learned that several of those eating such meat were likewise infected, and it is thus directly suggested that the forty-three pounds of veal sufficed to poison almost the whole amount of meat eaten at the festival.

Three days after the musical entertainment a children's celebration took place at Kloten in the same place, and the same butcher provided the meat for this occasion, but none of the several hundred children present became sick.

The epidemic broke out within twenty-four hours, the cases becoming daily more numerous. Nearly forty per cent. of all the cases occurred on the fifth and sixth days, and ninety per cent. of all were sick within eight days. Professor Huguenin was the first to suggest that the epidemic was the result of a calf-typhoid, a view which met with much opposition, since nothing was known of the existence of typhoid fever in the bovine species. The doubts were wholly removed when some twenty-seven cases of secondary infection subsequently arose. Their course was that of ordinary typhoid fever.

The occurrence of typhoid fever in calves was established by Walder, who examined the bodies of two animals which were killed four days after they became sick. Enlargement and injection of Peyer's patches, swelling of the mesenteric and retro-peritoneal lymphatic glands, and enlargement of the spleen were present in both cases. The calves were owned by separate individuals, and fatal cases of typhoid fever occurred in the families of their owners. The surroundings were such that it seemed probable that the animals had become infected in consequence of the disease in the families owning them.

Acetonæmia as the Cause of Diabetic Coma. — The occurrence of sudden death in cases of diabetes has long been apparent, and the origin of the essential condition, coma, has been sought for in various ways, but without any satisfactory conclusion having been arrived at. It has been supposed that some poison occasioned by the disease was present, and in certain instances it was thought that the coma was due to uræmia. In most cases, however, the symptoms of uræmia are lacking.

Again, it has been thought that the presence of sugar in the blood was an efficient cause of the coma. This view was based upon the coexistence of a decided diminution of the sugar in the urine and the onset of the comatose symptoms. The latter, however, appear in most cases without the former, and the general importance of the retention of sugar consequently loses its value.

The presence of a peculiar odor, compared to that of vinegar, chloroform, or beer, has frequently been observed in the breath, urine, and feces of diabetic patients, and has also been perceived in the bodies of those who have died from diabetes. The smell has been thought to be

that of acetone, a substance which has been regarded as a frequent product of acetous fermentation, and which may theoretically arise from the decomposition of glucose. It has therefore been thought that the diabetic coma may be the result of the formation of this substance in the blood, through the decomposition of the sugar there present. In corroboration of this view is the statement that acetone may produce the post-mortem appearances found in diabetic coma.

The experiments of Kussmaul, however, show that the effects of acetone are essentially like those of alcohol, and that a toxic action demands large doses.

In the editorial notice¹ from which the above statement is condensed, it is concluded "that while there is strong evidence that diabetic coma is, in many cases at least, accompanied by, and probably due to, the formation in the blood of substances of the ethyl-acetic series, sometimes capable of yielding acetone, there is not yet sufficient evidence that the symptoms are due to the presence of acetone in the blood to justify the diagnosis of acetonæmia."

Nervous Dyspepsia. — Leube² calls attention to the importance and possibility of eliminating from the group of chronic gastric catarrhs a form of dyspepsia which he regards as essentially a nervous affection, a nervous dyspepsia. The relation of nervous symptoms to the act of digestion he considers to be the direct result of the mechanical irritation of the nerves of the stomach at the beginning of digestion, and not a consequence of the absorption of the chemical products of abnormal digestion. A sensation of fullness in the epigastrium, regurgitation, nausea, irregular appetite, cerebral congestion, excitability, disinclination for mental work, a feeling of fatigue, especially in the legs, and sleepiness may all be regarded as normal results of a slight excess over moderate eating.

When these symptoms become unusually marked and permanent, they give rise to a severe chronic affection, whose cause is to be sought for in an abnormal reaction of the nerves of the stomach during digestion, and secondarily of the entire nervous system. This nervous dyspepsia is entirely distinct from the nervous symptoms which occur in chronic gastric catarrh, cancer of the stomach, and other affections, and only that form can be called a nervous dyspepsia in which there is no anatomical evidence against the exclusive affection of the nervous system, especially of the nerves of the stomach.

This disease is to be found almost wholly among the upper classes, affects either sex indiscriminately, and usually young people. Its essential feature is the misproportion between the severe subjective symptoms of the patient and the objective results of the respective act of

¹ The Lancet, May 11, 1878, 689.

² Deutsches Archiv für klinische Medicin, 1878, xxiii. 98.

digestion. This misproportion in the cases reported was determined objectively by an examination of the contents of the stomach, obtained by means of the œsophageal sound, seven hours after a meal of a definite sort.

The differential diagnosis between this affection and cancer of the stomach is readily made when the rapidly advancing cachexia, the age of the patient, the epigastric pain, the periodical vomiting, and the appearance of the matter vomited, with finally the evidence of the tumor to be obtained on palpation, are present to characterize the latter disease. When there is doubtful or obscure evidence of cancer the symptoms correspond rather with those of chronic catarrh.

The essential difference between nervous dyspepsia and chronic catarrh of the stomach lies in the fact that in the latter affection there are prominent loss of appetite, abnormal decomposition of the gastric contents, a prolonged stay in the stomach of the ingesta, with frequent vomiting of the same associated with abundant mucus. In nervous dyspepsia, on the contrary, the time of digestion is normal, the food passes through the stomach, and there is no mucus present in whatever may be removed from the stomach through the œsophagus. Nervous dyspepsia, furthermore, becomes probable if a carefully conducted dietetic regimen produces no effect upon a hypothetical chronic catarrh. This probability is rendered certain when the stomach is washed out, and the contents are found to give evidence of a normal digestion, while favorable results follow a general strengthening treatment rather than one directed towards the act of digestion.

The differential diagnosis between nervous dyspepsia and ulcer of the stomach is more difficult. For in many cases of the latter affection the symptoms may be the same, and the contents of the stomach indicate a normal digestive act. The effects of treatment are deemed of special importance in making the differential diagnosis in such cases.

As the symptoms of dilatation of the stomach correspond with those of chronic catarrh, and the results of physical examination are usually sufficient to establish the diagnosis, this lesion rarely needs to be specially differentiated. The same is true of gastralgia, whose neuralgic nature is so pronounced, manifested by a violent paroxysmal pain with intermissions freed from any dyspeptic symptoms whatever.

Hepatic Pulsation without Tricuspid Insufficiency. — After calling attention to the hitherto accepted diagnostic importance of a systolic hepatic pulsation as pathognomonic of the existence of an insufficiency of the tricuspid valve, Rosenbach¹ states that cases occur in which such a pulsation, not to be distinguished from that produced by tricuspid insufficiency, may exist in the absence of this lesion. There are, consequently, two forms of hepatic pulsation to be recognized, only one of which is associated with tricuspid insufficiency.

¹ Deutsche medicinische Wochenschrift, 1878, xl, xli, xlii.

After reporting a case of the second exceptional variety, he gives the following explanation of its occurrence: The condition of apparent special importance was an aortic insufficiency, in which affection of the heart, above all others, the difference between the initial and terminal arterial tension is the greatest, and the smallest arteries, even the capillaries, pulsate. It is therefore quite possible in such cases for a hepatic pulsation to occur. That such does not ordinarily take place is probably due to the absence of favoring conditions, which were present in the case reported. These were considered to be a decided enlargement of the liver, with a powerful action of the left ventricle and a narrow aorta. The impulse resulting from the powerful initial tension thus became readily transmitted to the enlarged and elastic liver easily accessible to the touch.

In uncomplicated aortic insufficiency an enlargement of the liver from passive venous congestion only takes place when the left ventricle is incompetent, or the arterial elasticity is diminished; consequently the conditions on the part of the heart and arteries which favor an arterial hepatic pulsation are usually lacking when the liver is thus enlarged. The cause of the favoring combination in the reported case was attributed to the presence of an obliterated pericardium and a pleuritic exudation which produced a passive venous congestion at a time when the left ventricle was still competent to overcome the aortic lesion.

(To be concluded.)

THE AMERICAN MEDICAL ASSOCIATION.¹

GENERAL SESSIONS.

THE general sessions were held in the morning, beginning on Tuesday, May 6, 1879, and terminating on the following Friday; they were well attended, business was conducted in an orderly manner, and the annual addresses upon the progress of the several branches of medical science, by the chairmen of the several sections, were unusually interesting and valuable.

The address of welcome, delivered by Dr. Logan, chairman of the committee of arrangements, contained the following statesman-like and liberal reference to the *questio vexata* of quarantine in yellow fever, which very happily hits off the real point at issue:—

“For all practical purposes, it is not necessary to demonstrate whether yellow fever is always imported, or whether, under certain peculiar and exceptional circumstances, it arises upon our coast from local causes alone. That it can be imported and will, or can become epidemic from the neglect of proper sanitary regulations in certain localities, will not be questioned. That it may be imported and not become epidemic, in the absence of the circumstances which favor its propagation, will also be admitted without discussion. The

¹ Concluded from page 684.

very warm contest, therefore, which has been carried on for many years in regard to the exotic or local causes of yellow fever does not seem to be justified by the necessities of the case, or the importance of arriving at conclusions of a definite character with reference to the possibility of excluding it altogether as an epidemic from our shores. Let the facts of importation or local origin, or of both, be as they may, no argument is needed to establish the proposition that no means of preventing the occurrence of yellow fever should be neglected, which could, by possibility, be brought into requisition.

"The value of a properly regulated system of quarantine cannot be successfully controverted. The value of an enlightened and thorough system of internal sanitary regulations cannot be estimated. In both points of view, the facts developed in regard to the recent epidemic of yellow fever upon our coast are a sad commentary upon the wisdom and fidelity of both state and local authorities. Not being a statesman, and this not being the time nor the occasion to discuss the question of federal or state jurisdiction, which has excited some controversy of late, I will still venture to say that if those States through whose borders the fell destroyer makes his incursions continue to be insensible to the lamentations of widows and orphans and the wreck of homes and fortune, I for one would gladly welcome the intervention of the paternal care of the general government in the effort to save the lives of the people, even though it be at the expense of a cherished political idea."

The permanent secretary, after reading the registry list, presented several letters from absentees, among them one from Professor Bowditch, who regretted that a rupture of the tendon of the rectus femoris muscle, caused by a fall, had prevented him from filling his usual place at the meeting.

Dr. Parvin's presidential address was a powerful protest against the materialistic tendencies of pseudo-science; it was frequently interrupted by applause, and the thanks of the Association were tendered in a rising vote. Subsequently five thousand extra copies of it were ordered to be printed for general distribution.

On the first day the usual protests were received against the registration of certain delegates from Arkansas, Indiana, and West Virginia; but the Arkansas matter may now be considered as settled by the action of the Judicial Council in definitely recognizing the one of the contesting state societies of which Dr. Jennings is the secretary.

SECOND DAY. A resolution was offered requesting Congress to abolish the duty upon quinine, which prevailed, after considerable opposition.

Dr. N. S. Davis, of the special committee appointed to consider the recommendations in Dr. Richardson's presidential address of last year, made a report favoring amendment of the present rule governing prize essays, expunging from Section III. all relating to prize essays, and substituting a clause declaring that there shall be four prizes of \$250 each for the best original contributions, the chairmen of the sections to be a committee to take charge of the papers and arrange the details of competition. The report was received, and as an amendment was obliged to lie over for one year. The committee was discharged.

The next business being the consideration of proposed changes in the plan of organization, the amendment offered by Dr. J. M. Keller (Ark.), that "in future the Committee on Nominations shall present the name of no person for appointment or election to office or position, save on the Committees on Necrology and Climatologv, unless the party nominated be in attendance on the Association at the time," was submitted to a vote and was lost. The following motion, offered by J. J. Callwell (Md.), to "form an additional section to be known as the section on neurology and electrology," was also tabled.

An amendment, offered by Dr. T. Clay Maddux (Md.), to form an additional section on diseases of the genito-urinary organs, including syphilis and dermatology, was, on motion, referred for consideration to the section on surgery. The amendment, offered by Dr. A. N. Bell (N. Y.), to consolidate Section IV., on medical jurisprudence and psychology, and Section V., on state medicine and public hygiene, and call it Section VI., was adopted.

A motion, offered by Dr. Davis, to adopt an amendment declaring it to be an infraction of the Code of Ethics for any member of the Association to teach or aid in the instruction of any student of an irregular or exclusive system of medicine brought Dr. Dunster, of Ann Arbor, to the desk, where he delivered a cogent and carefully compiled argument against the amendment, which carried conviction with it. He denounced the amendment both as regards its expediency and its equity. He made a strong point by showing that the measure was based on the assumption that the teaching of scientific medicine to the students of exclusive systems would tend to build up those systems, or that the teaching of truth would establish error. He pointed to the fact that these exclusive students were in attendance upon the public clinics of many of the members of the Association, and could not be prevented from attending; and a literal and rigid application of the rule would also prevent medical authors from teaching such students through their writings. On motion the amendment was laid on the table until the next meeting.

THIRD DAY. Dr. N. S. Davis presented a short report on Ozone. Dr. J. M. Toner, as chairman of the Committee on Necrology, presented a report which included the names of one hundred and fifty physicians who perished in the yellow fever epidemic, with the place and date of death. These were not all members of the Association, but the chairman considered it a duty as well as a privilege to place on record the names of these martyrs in the cause of humanity.

Dr. S. Chaillé, of New Orleans, read a paper on State Medical Societies and State Medicine, which had been referred from the section to the general session, in which he formulated his views as to the relationship existing between the American Medical Association and its constituent societies, and embodied them in some practical suggestions that were acted upon the following day.

Dr. Edward Seguin presented the claims of international uniformity in medical records as attainable by the general adoption of the metric system in scientific and popular medical writings, and its use by representative societies in their transactions.

Dr. S. Chaillé offered a resolution that Congress be petitioned to allow any

student of scientific pursuits to import free of duty any one book for his own use, which was adopted.

Dr. Brodie, of Detroit, presented a communication from the Association of Medical Editors, which denounced the practice of advertising patent and proprietary medicines by medical journals, as calculated to extend the use of such articles, and therefore opposed to the spirit of the Code of Ethics. Referred to the Judicial Council.

FOURTH DAY. The reports from the sections were received. A report offered by Section IV. was adopted as follows: "The section on state medicine and public hygiene, having approved the following resolutions offered by Dr. Chaillé, respectfully recommend their passage by the American Medical Association:—

"*Resolved*, That a standing committee on the more efficient organization of this Association, and of its branches, consisting of five members, should be appointed by the president.

"*Resolved*, That this committee be instructed to advise and recommend ways and means to secure greater uniformity as well as greater strength of organization of the state medical societies and their auxiliary branches.

"*Resolved*, That among the ways and means be considered: (1.) The compilation of a model code of detailed regulations for the government of state and county medical societies. (2.) The requirement from every state medical society of an annual report, to contain certain data to be specified, and necessary to show the condition and progress of each of these state societies and of their auxiliary branches; and also containing a perfect summary of the peculiarities of its organization, and of the measures being used by it to promote medical organization; and still farther to contain a complete summary of the laws of the State in reference to state medicine, and of the efforts being made to promote the practice of state medicine. (3.) The publication in the annual Transactions of this Association of the consolidated report of the above reports from each State, together with special notes of the meritorious work done by any of the branches of this Association. (4.) The substitution of a periodical medical journal for the present annual volume of Transactions. (5.) The non-recognition by this Association of state societies which make no provision encouraging the organization of auxiliary societies in counties, etc. (6.) The advisability of not electing any person either a permanent member or a member by invitation, unless such person be a member of a state society, provided that there be such a society recognized by this Association in his State. (7.) The advisability of refusing to admit to this Association delegates from societies auxiliary to the state society, unless the certificates of delegates be indorsed by the authorized officer of the state society. (8.) The advisability of refusing to admit any delegates except those selected from, and elected only by the vote of, members who have paid all fines due to their respective county and state societies, and of establishing the principle that only those members of branch societies who are entitled to vote and have paid all fines and dues shall be entitled to delegates. (9.) The advisability of urging every medical college to have at least one lecture delivered to every

graduating class on the importance to the profession and the public of medical organization."

These resolutions were adopted, and the committee was appointed, consisting of Drs. Gross, Pratt, Davis, Bell, and Garcelon.

The Committee on Prize Essays awarded the prize to the contribution signed "In utrumque paratus," entitled *A Consideration of Certain Forms of Primary and Secondary (Local) Degeneration of the Lateral Columns of the Spinal Cord, with Especial Reference to an Infantile Rare Form*. The announcement that the author was Allan McLane Hamilton, of New York, was received with applause.

The Committee on State Boards of Health announced that such organizations had been established in twenty-one States: Alabama, California, Colorado, Connecticut, Delaware, Georgia, Illinois, Kentucky, Louisiana, Massachusetts, Maryland, Michigan, Minnesota, Mississippi, New Jersey, North Carolina, Rhode Island, Tennessee, Texas, Virginia, and Wisconsin.

The Committee on Nominations made the following report, which was adopted:—

President, Dr. Lewis A. Sayre, of New York.

Vice-presidents: first, Dr. R. Beverly Cole, of California; second, Dr. E. M. Hunt, of New Orleans; third, Dr. H. O. Marcy, of Massachusetts; fourth, Dr. F. Peyre Porcher, of South Carolina.

Treasurer, Dr. R. J. Dunglison, of Pennsylvania.

Librarian, Dr. Wm. Lee, of District of Columbia.

Committee on Library, Dr. Johnson Eliot, of District of Columbia.

Assistant secretary, Dr. Walter Gillette, of New York.

Next place of meeting, New York. Time of meeting, first Tuesday in June, 1880.

Committee of Arrangements: Drs. L. O. Vanderpool, Stephen Smith, William M. Polk, Robert Weir, Charles I. Pardee, A. A. Smith, T. F. Sabin, of New York; Joseph Hutchinson, of Brooklyn; M. H. Burton, of Troy; and Parker, of Poughkeepsie.

Committee on Prize Essays: Dr. Austin Flint, Sr., chairman; Alfred C. Post, Jos. C. Hutchinson, J. W. S. Gouley, and Montrose A. Patten, of New York.

Committee on Publication: Drs. W. B. Atkinson, T. M. Drysdale, A. Fricke, S. D. Gross, Caspar Wister, R. J. Dunglison, of Pennsylvania, and William Lee, of District of Columbia.

The following are the nominations for chairmen and secretaries of sections:—

I. Practice of Medicine, etc.: Dr. J. S. Lynch, of Maryland, chairman; Dr. W. C. Glasgow, of Missouri, secretary.

II. Obstetrics, etc.: Dr. Albert Smith, of Pennsylvania, chairman; Dr. Robert Battey, of Georgia, secretary.

III. Surgery and Anatomy: Dr. W. T. Briggs, of Tennessee, chairman; Dr. J. Powell Adams, of Minnesota, secretary.

IV. State Medicine, Medical Jurisprudence, etc.: Dr. James F. Hibbard, of Indiana, chairman; Dr. T. F. Wood, of North Carolina, secretary.

V. Ophthalmology, etc.: Dr. Bolling A. Pope, of Louisiana, chairman; Dr. Eugene Smith, of Michigan, secretary.

Members of Section on State Medicine, Public Hygiene, etc.: Drs. W. H. Hawkins, Arkansas; Jerome Cochrane, Alabama; W. F. Cherry, California; C. Denison, Colorado; C. A. Lindley, Connecticut; Wm. Marshall, Delaware; Thos. Autisell, District of Columbia; J. P. Wall, Florida; J. P. Logan, Georgia; S. Brandeis, Kentucky; S. E. Chaillé, Louisiana; A. P. Snow, Maine; T. B. Evans, Maryland; H. I. Bowditch, Massachusetts; H. B. Baker, Michigan; C. N. Hewett, Minnesota; Wirt Johnston, Missouri; H. H. Mudd, Missouri; J. Black, Nebraska; G. P. Conn, New Hampshire; D. O. English, New Jersey; A. N. Bell, New York; J. C. Walker, North Carolina; J. C. Reeve, Ohio; H. Carpenter, Oregon; Benjamin Lee, Pennsylvania; E. M. Snow, Rhode Island; R. A. Kinlock, South Carolina; T. A. Achison, Tennessee; H. W. Brown, Texas; F. D. Cunningham, Virginia; L. C. Butler, Vermont; E. A. Hildreth, West Virginia; J. T. Reese, Wisconsin; Joseph R. Smith, U. S. A.; A. L. Gihon, U. S. A.

Committee on Necrology: Dr. J. M. Toner, of District of Columbia, chairman; Drs. R. F. Mitchell, of Alabama; J. P. Wall, of Florida; F. W. Hatch, of California; J. B. Cummings, of Arkansas; C. Denison, of Colorado; G. W. Russell, of Connecticut; J. H. Richards, of Delaware; T. S. Hopkins, of Georgia; J. H. Hollister, of Illinois; G. L. Sutton, of Indiana; H. B. Ransom, of Iowa; C. V. Mottrom, of Kansas; Dudley S. Reynolds, of Kentucky; E. A. Lewis, of Louisiana; E. F. Sanger, of Maine; John Morrison, of Maryland; L. F. Warner, of Massachusetts; G. E. Barney, of Michigan; D. W. Hand, of Minnesota; John Browning, of Mississippi; J. M. Richmond, of Missouri; J. R. Black, of Nebraska; L. S. Hill, of New Hampshire; H. D. Didama, of New York; John Blaine, of New Jersey; T. J. Haywood, Jr., of North Carolina; Starling Loving, of Ohio; Frank Woodbury, of Pennsylvania; C. H. Fisher, of Rhode Island; Manning Simmons, of South Carolina; J. B. Lindsay, of Tennessee; H. W. Brown, of Texas; O. F. Fassett, of Vermont; L. S. Joyner, of Virginia; R. W. Hazlett, of West Virginia; J. T. Reeves, of Wisconsin; J. J. Woodward, U. S. A.; A. L. Gihon, U. S. A.

To represent the Association abroad, Drs. Seguin, Yandell, J. M. Da Costa, Gunn, Turnbull, Warren, and J. T. Hodgson.

Delegates to Canadian Association, Dr. H. Hutchins, Dr. W. Brodie.

On motion an honorarium of six hundred dollars was voted to be appropriated for the permanent secretary, "provided so much money remain in the treasurer's hands after paying running expenses."

A resolution was offered by the nominating committee, which was adopted, directing the publication committee to advertise for proposals for publication of the Transactions, and that the contract be awarded to the lowest and most responsible bidder.

Dr. Davis offered a vote of thanks to the railroad and steamship companies who had extended favors, the committee of arrangements, the medical fraternity of the city, and finally to "the people of the queen city of the empire State of the South," which was unanimously adopted by a rising vote.

Dr. Parvin introduced the president elect, Dr. Sayre, who was suffering

from hoarseness, and spoke only with great effort, thanking the association for the honor conferred upon him, and offering them a welcome to New York at the next meeting. Adjourned.

SECTION I.

Practical Medicine, Materia Medica, and Physiology. Chairman, Dr. Thos. S. Rochester, of Buffalo, N. Y.; secretary, Dr. W. C. Glasgow, of St. Louis, Mo.

Dr. N. S. Davis read a number of Clinical and Meteorological Records, which were referred to the Committee on Publication.

A paper upon the Experience of Consumptives in Colorado, and some of the Aero-Hygienics of Elevation above the Sea, furnished by Chas. Denison, M. D., of Denver, Colorado, was also read by Dr. Davis. It was a continuation of previous reports upon the sanitary advantages of extreme altitudes in the treatment of pulmonary diseases. The paper was a very long one, and was only partially read, the author requesting that the section recommend the signal service bureau to prepare charts for his paper. This was granted.

Dr. L. D. Bulkeley presented a paper On the Use of Water in the Treatment of Diseases of the Skin in which the therapeutics of baths were discussed.

The following communications were referred to a sub-committee for examination previous to publication: On *Veratrum Viride* and its Uses, by Dr. G. F. Cooper, of Georgia; On Plastic Bronchitis, by Dr. W. C. Glasgow, of St. Louis, Mo.; and one on Inflammation of the Hair Follicles of the Beard, by Dr. J. V. Shoemaker, of Philadelphia.

The address of the chairman, read before the general session and referred for discussion to the section, was a careful review of the progress made during the past year in the field of practical medicine, but particularly considered the aetiology of typhoid fever, and recommended a national quarantine regulation against yellow fever. The latter proposition led to considerable discussion, in which the old line of argument that because the disease is sometimes sporadic *ergo* it is never imported was again urged against the usefulness of quarantine. The address was finally referred to the publication committee.

SECTION II.

Obstetrics and Diseases of Women and Children. Dr. E. S. Lewis, of New Orleans, chairman; Dr. Robert Battey, of Georgia, secretary.

Dr. Dunster, of Michigan, spoke of the operation of perineorrhaphy, and opposed the practice of constipating the bowels after the operation, believing that better results are obtained by keeping the bowels open by laxatives producing one or two evacuations a day. This view was supported by Dr. Pallen, of New York, and others, but opposed by Dr. Albert H. Smith and R. Beverly Cole of California.

Dr. Pallen presented a new model pessary for retroversion, which was on a similar principle to the Hodge lever pessary, but was in construction a ring, to the middle of which was immovably attached the half of another ring placed at an angle of about 60° with the base, and containing two bulbous enlargements near its centre, which, when applied, acted by elevating the fundus uteri. The material of which these pessaries are constructed is of

hard rubber, but the speaker recommended the preliminary use of others of the same pattern, but in soft rubber, until the uterus becomes accustomed to the pressure. The half-ring gives a certain elasticity to the instrument, which entitles it to be called a spring pessary.

Dr. Pallen reported very good results from the use of this device. Two days later the section by appointment considered the question of pessaries and uterine displacements, the chairman appointing Dr. Albert H. Smith to open the discussion. Dr. Smith's remarks showed complete knowledge of the subject, and were listened to with marked attention. Dr. Pallen said that he felt obliged to differ entirely from the theory of Dr. Hodge as to the cause of uterine displacements, and that adopted by the previous speaker. In discussing the pathology of the condition, he stated that the causes of prolapse of the uterus were mainly three. (1.) Chronic congestion. The valveless veins in the uterine wall becoming engorged from alterations in the portal circulation, the organ naturally becomes increased in size and weight (the pathology being analogous to that condition of the pelvic circulation which leads to the formation of hæmorrhoids). (2.) Loss of support from below, owing to rupture of the perinaeum. (3.) Mechanical pressure from above by abdominal tumors, exostosis of pelvis, cellulitis, fibroid growths, etc. He repudiated the idea that the broad ligaments are in any proper sense of the term ligaments, or that they rendered any aid whatever in holding up the uterus.

Dr. Campbell, of Augusta, recommended an intra-uterine stem made from a section of a small rubber catheter, in the treatment of flexions; and Dr. Taliaferro recommended a bi-metallic standard as in his experience leading to remarkable results, which he considered to be due to electricity.

The chairman read a paper from Dr. E. Cutter, of Massachusetts, on the treatment of uterine displacements by the stem pessary, and exhibited the apparatus. A report of a fatal case with operation at the fifth month for tubo-ovarian pregnancy was read by Dr. Battey.

Dr. Turnipseed, of South Carolina, exhibited a remarkable set of instruments for operating upon vesico-vaginal fistula; also a new hysterotome; a uterine dilator and speculum; a new vaginal speculum; and, last but not least, "a new apparatus for delivering women without the use of the forceps, on the principle of atmospheric pressure," which utilized the well-known expedient, adopted by boys from time immemorial, to lift bricks by pressing thereon a moist disc of leather having the point of support in its centre. Much time, labor, and misplaced ingenuity were expended upon these instruments, which showed the tendency of an inventive genius to prefer instruments of his own devising to others better adapted to the purpose, but made by some one else.

A paper on the Electrolysis of Fibroids, also sent by Dr. Cutter, was read by Dr. Dunster, and on motion was referred to the Committee on Publication.

Dr. Pallen presented drawings of lacerated perinaeum, and explained his operation for restoring the posterior wall of the vagina, which he termed transposition of the vagina and vaginal cervoplasty, which admits of explanation only by demonstration or a series of diagrams.

The annual address of the chairman, referred by the general session, now came up for discussion. Dr. Albert H. Smith said that while a presentation

can be changed in many cases by external or conjoined manipulation, efforts to convert an occipito-posterior position into an anterior one, and to maintain it until delivery, had, in his hands, proved uniformly ineffective. In regard to tying the cord (the address having recommended delay until the placenta was being compressed by returning uterine contractions), he stated that he did not regard the early or late ligature as an important question, but his practice was to tie as soon as the pulsation ceases. He did not bandage after delivery.

SECTION III.

Surgery and Anatomy: Dr. Moses Gunn, of Chicago, chairman; Dr. J. R. Weist, of Richmond, secretary.

Dr. A. C. Post reported a case of deformity of the face and hands occasioned by cicatricial contraction following a burn, in which satisfactory results followed a series of plastic operations.

Aspiration of the Knee-Joint was the subject of a paper by Dr. H. O. Marcy, of Massachusetts, which elicited considerable discussion, the conclusion being that in obstinate cases of serous effusion aspiration might be resorted to with advantage, using a needle large enough to permit the discharge of flakes of fibrin; in purulent exudation it was advised to open the joint for free drainage under antiseptic precautions.

Dr. Turnipseed presented some new instruments, including a new surgical needle, curved and spring clamp at the point; new apparatus for treating fractured clavicle; and new method of reducing dislocation of the elbow-joint, which brought out considerable discussion, the general verdict being adverse to the plans of treatment recommended.

Dr. Davison, of Ohio, exhibited some urinary calculi, and Dr. Mathan, of Kansas, read a report of a case of chronic dislocation of the hip-joint.

On Wednesday, Dr. Louis A. Sayre, of New York, read a paper on the Treatment of Spondylitis by Suspension and Retention in the Improved Position by means of the Plaster-of-Paris Bandage, in which he contributed the condensed history of more than a hundred cases which he had treated by this method, which demonstrated the good effects of the treatment. At the request of the section, he publicly applied the jacket upon a patient after the section adjourned, and again on Friday morning after the adjournment of the Association.

A case was reported by Dr. Quinby, of New Jersey, illustrating the value of conservative surgery; and Dr. J. E. Sink, of Indiana, read a paper recommending amputations by the cone-shaped method, which was generally discussed.

Dr. H. F. Campbell, of Augusta, read a paper upon Urinary Calculus, with Consideration of its Hygienic, Etiological, Pathological and Surgical Relations, based upon the clinical histories of forty-six cases.

The secretary presented a communication from Dr. William Scott upon the removal of uterine growths by the *écraseur*; and also one on the treatment of hemorrhoids by carbolic-acid injections, by Dr. Weist, which was generally approved in the extended discussion which followed.

Dr. Maddux, of Maryland, read a protracted paper upon the Nature of Gonorrhoea, which was remarkable from the fact that after a long dissertation

upon ethnology and the history of the world, including original sin, it had very little to say about gonorrhœa. It was referred without discussion.

Dr. T. F. Rochester presented a pathological specimen of perityphlitic abscess opening into the bladder and rectum, and made some remarks upon the case; after which Dr. A. W. Pollock, of Pennsylvania, exhibited a new inhaler for the administration of anæsthetics, which is quite as efficient as any in use, but less convenient than the ordinary towel.

The chairman, in his annual address, spoke in the highest terms of antiseptic surgery, of rapid lithotripsy on the plan of Dr. Bigelow, and other evidences of material progress in surgery. He devoted considerable time to the discussion of the formation of pus, and, inclining to Cohnheim's views, he declared that necrobiotic change causes softening and degeneration, but never furnishes pus, the cells of which always migrate from the neighboring capillary blood-vessels.

The question of dividing the section on surgery and anatomy, and creating one to be known as the section on syphilis and the genito-urinary organs, including dermatology, which had been referred by the general session to this section for its decision, in the course of discussion was generally opposed, and was therefore withdrawn by its author, with the consent of the section.

SECTION IV.

State Medicine, etc. Dr. Billings being prevented from serving as chairman by temporary illness, Dr. J. L. Cabell was unanimously elected to preside; Dr. J. T. Reeve, of Wisconsin, secretary.

Dr. A. N. Bell announced that by the action of the Association Sections IV. and V. were consolidated. He also announced the death of Dr. Wm. N. Compton, of Mississippi, the chairman of the section on medical jurisprudence.

Dr. E. Grissom paid an eloquent tribute to the memory of Dr. Compton, who had perished during the last epidemic in his efforts to save his fellow-men. The chairman appointed Drs. Grissom and Toner to prepare proper resolutions on the death of this distinguished physician. The report of this committee was a high tribute to the virtues and attainments of Dr. Compton; it deplored his untimely death, expressed deep regret at the loss to the profession, and declared a determination to cherish his memory. The resolutions were adopted, and ordered to be placed on the minutes.

The first paper presented was by Dr. H. A. Johnson, on *The Regulation of Medical Practice by State Boards of Health as Exemplified in Illinois*, which satisfactorily demonstrated the value of state supervision over the practitioners of medicine, and detailed the thorough reform effected in Illinois by the operation of the new law.

Dr. Rauch, of Chicago, also spoke of the success of the present system of regulation of practice in Illinois, and of the influence it had already exerted in elevating the average standing of the profession, acting beneficially both to the profession and the public.

Dr. Gibon, U. S. A., favored any regulation that would prevent pretenders and charlatans from imposing on the public. Considerable discussion followed of the same general tenor.

An excellent paper upon *State Medical Societies and State Medicine* was

read by Dr. S. E. Chaille, of Louisiana, which was listened to with marked attention; and, upon a motion to that effect, he was requested to repeat it the next morning before the general session. (The conclusions of the paper were subsequently formally adopted by the Association.)

Dr. E. Seguin read a short paper describing a deformity of the upper extremity, which he termed a psycho-physiological hand, and which he observed to follow epilepsy. From this he was led to recommend the education of idiots by the cultivation of the senses, and gave an account of an interesting case of idiocy trained by a lady in New York.

Dr. Dunster, at the request of the chairman, read a rather lengthy paper on the Principles of Protective Sanitation in its Relation to Public Hygiene, by Dr. Storer, who was not present. The paper was referred without discussion.

In the place of a report on the intervention of Physicians in Education, by Dr. R. J. O. Sullivan, of New York, who was absent, Dr. E. Seguin made some remarks upon the subject, urging such intervention as a duty.

A paper on the Medical Examiner System of Massachusetts, by Dr. F. A. Harris, was read and referred to the publication committee.

A report was received from Dr. Billings, of Washington, on the Construction of Hospitals, which was accompanied by numerous diagrams and illustrations. After reading, this was also referred for publication.

The section then considered the recommendations in the address on State Medicine, presented by Dr. Woodworth to the Association on behalf of Dr. Billings, who was the chairman of the section, but incapacitated by illness from attending.

The resolutions call upon the American Medical Association to recommend that every physician shall aid the superintendent of the census in his efforts to make up the statistics of mortality; and, secondly, that every physician make a record of all his cases from the first of June. Blanks will be furnished for such reports on application.

These resolutions were adopted.

The section also announced its approval of measures calculated to organize county medical societies, and promised, whenever it may be deemed necessary, to adopt such steps as would contemplate gathering all the members of the profession, in good standing, into their respective county societies.

SECTION VI.

Ophthalmology, Otolaryngology, and Laryngology. H. Knapp, of New York, chairman. In the absence of Dr. Scott, appointed at the last meeting, Dr. Calhoun, of Atlanta, was elected secretary.

The first paper was read by Dr. Williams, giving an interesting account of a case in which there was an ivory exostosis of the orbit, with the operation.

Dr. Voorhees, of Memphis, reported a case of impairment of vision following excessive doses of quinine.

The chairman then presented some microscopic preparations of a sarcoma of the optic nerve, and others showing degeneration of the iris and ciliary body, probably of tuberculous and syphilitic nature, which led to a most interesting and valuable discussion, which also included the diagnosis and treatment of syphilitic diseases of the cornea.

On Wednesday the section held an extra session in the morning from nine to eleven o'clock, to discuss cataract operations. A paper was read by Dr. Knapp on Cataract Extraction. Dr. Calhoun presented a report of one hundred and eighty-five cases of cataract operations, with some suggestions as to the mode of operating and the after-treatment. Dr. Pope, of New York, also read a paper on the same subject. The papers were very generally discussed. Dr. Knapp condemned the peripheral incision of the capsule, as recommended by Von Graefe, as frequently requiring a secondary operation for the removal of an opaque capsule. He favored a central or vertical incision as less likely to interfere with the nutrition of this structure. He exhibited a fine, sharp-pointed needle cystotome which he had devised and generally employed in the operation, and reported a series of seventy cases in which this operation was performed, in which there occurred neither iritis nor capsulitis, but the eye was perfectly clear after the second day.

In a case of Morgagnian cataract it was agreed that the incision into the capsule should be on a level with the upper edge of the nucleus. In those cases where the capsule is opened by a V-shaped incision, it often occurs that the tongue between the lines curls forward, and causes adhesion of the lip of the wound to the stump of the ciliary muscle; or it may adhere to the inner wall of the cornea, or may set up irritation requiring extirpation of the globe.

The opinion was generally expressed that a primary iridectomy was better for the patient, but disadvantageous to the operator, as many of the patients would not return, because the first operation apparently did them no good.

A paper describing an operation for the radical cure of cystoid cicatrix was read by Dr. D. S. Reynolds, based on thirty-four cases. The procedure recommended was by means of a fine silk ligature to take a stitch in the sclera and one through the superficial layers of the cornea, drawing the thread tightly over the cystoid projection and tying the ends. The cyst disappears into the anterior chamber, and the corneal stitch comes out in a couple of days. Dr. Knapp spoke favorably of the operation, and said that the condition is more frequent than is generally supposed.

Dr. Eugene Smith reported a successful operation upon a case of xerophthalmia. Dr. Knapp exhibited several specimens, one of plastic cystitis; another of traumatic origin, showing a piece of brass lying in the ciliary body.

The chairman also gave a fine demonstration of the stages and effects of mastoid disease, which was illustrated by diagrams and the use of the black-board and closed by exhibiting a number of microscopical specimens and instruments.

Dr. Knapp's annual address before the general sessions was a very able review of the advance in ophthalmology and otology for the past year. He recommended the application of the metric system in the formulae of oculists, and referred to the introduction of new remedies into ophthalmic practice. He considered the present treatment of glaucoma as unsatisfactory, and spoke in favorable terms of the use of eserine in this disease. No abstract, however, could do justice to this valuable and condensed report, which was heard with marked attention throughout, and warmly applauded.

THE HARVARD MEDICAL SCHOOL AND WOMEN.

THE question of admitting women to the medical department of the first university of America has been of late the subject of much discussion; and now that the affair appears to be reaching a crisis it is proper that we should lay before our readers some account of what has been done, and express in no uncertain language what we believe is the sentiment of the majority of the profession.

Mr. George O. Hovey, who died rather less than two years ago, left a large sum of money to be employed for benevolent purposes according to the discretion of the trustees. One of these, Miss Hovey, the daughter of the testator, wrote to President Eliot on March 21, 1878, offering to give the Harvard Medical School the sum of ten thousand dollars, on condition that women should be admitted to its advantages "on equal terms with men." About the same time there was a good deal of bustle among prominent sympathizers in the woman movement; several members of the faculty were "interviewed," and it soon became an open secret that if the proposal should be accepted a much larger sum than that offered by Miss Hovey could be obtained in addition to it,—that is, if this additional sum should be insisted on. In due time the matter came before the overseers of the university, and the following gentlemen were appointed a committee to report upon it: Alexander Agassiz, chairman; Dr. Morrill Wyman, President Eliot, J. Elliot Cabot, and Dr. LeBaron Russell. After a year's consideration the committee has presented two reports, that of the minority being signed by Dr. Russell alone. We understand that these reports have been discussed by the overseers, but final action has not yet been taken. The report of the majority favors the admission of women under certain conditions, which we will mention later. We feel not a little diffidence in speaking our mind on a report signed by such distinguished men, but it is, we believe, our duty to assert that the report does not do justice to the difficulties of the case, and that the premises in no way warrant the conclusion. We will follow the line of argument with all possible brevity, making our comments as we go along.

The majority begin by stating that they have studied the results of experiments made in this direction in America, England, and on the continent of Europe, and that they find the evidence inconclusive. One reason of this, they say, is that the social conditions in Europe are so different from these in America that the experience of the former does not apply to the latter. We must object to the second of these statements, at least. The question at issue is largely one of principle. There is a radical distinction to be drawn between morals and manners. What is objectionable in its very essence is as much to be condemned in one country as in another.

The report shows conclusively that the number of women in Europe who avail themselves of their opportunities is insignificant, and that the extent of the "woman movement" has been greatly exaggerated. The majority believe that we must discard precedents, and consider the question "on its own merits." They assume that the demand for female physicians is increasing, and likely to increase still more. Their reasons for this opinion strike us as open to a contrary interpretation. The report continues:—

"The problem is a serious one for the university. Thus far it has educated men, and men alone, and has always found its resources inadequate for this work. The governing boards might properly decline to enlarge the university's sphere of action, even for ends of approved utility; and it is emphatically their duty to refuse to try experiments which might impair the execution of the trusts they have already assumed."

Here is a strictly logical conclusion. We cannot understand why, when they had reached it, the majority did not feel that they had done their whole duty. They, however, thought otherwise, and next take up the question of establishing a completely separate school for women, which they put aside as too serious an undertaking. "It is even stated," says the report, "by a considerable number of the most highly cultivated women physicians of the country that the same intellectual standard cannot be maintained in a medical school devoted to women alone as in a school for men; and they further assert that the intellectual stimulus obtained by the female students from their association with men is an all-important element of success." We confess we are surprised at so frank an admission of inferiority. Yet a few lines further on the majority tell us that "under these circumstances" they think it desirable that the experiment of admitting women to the Medical School should be tried. More surprising still, they assure us that "their opinion is based not only on carefully weighed statements of views favorable and unfavorable to the movement, but upon consultation with the professors and teachers of the Medical School, and upon individual expressions of opinion from the members of the Massachusetts Medical Society." Let us see what the basis of this statement may be.

The committee sent the following questions to about thirteen hundred members of the State Medical Society:—

- "(1.) Are you in favor of admitting women to the Medical School?
- "(2.) Are you in favor of admitting women on equal terms with men?
- "(3.) Are you in favor of a separate school for women?
- "(4.) If in favor of medical coeducation, specify the subjects which, in your opinion, can be taught in common, and those in which men and women should receive separate instruction."

The report states that seven hundred and twelve answers were received, and gives a very good classified list of the answers to questions 1, 2, and 3. When, however, the majority came to interpret the answers, they chose to employ those to question 4. It is well known that statistics may be made to prove pretty nearly anything, and the majority find that about five hundred and fifty "are in favor of the admission of women, or in favor of some form of recognition." We have not space to go into the matter thoroughly, but we must beg leave to point out that the majority do not present the following facts: Five of the seven hundred and twelve who answered gave no definite reply to 1, 2, and 3. Question 1 was answered in the negative by three hundred and fifty-six, more than half, and question 2 by three hundred and sixty-seven.

Let us now turn to the views of the faculty of the Medical School. We will quote from the report:—

"Of twenty-one members of the medical faculty, who expressed their views in writing, six are in favor of admitting women to the school with restrictions. Three are in favor of making the experiment, but have strong doubts of its expediency or success. Seven are strongly opposed to the plan. Five are opposed, but willing to try the experiment under certain conditions.

"Of the six in favor, only one is in favor of admission without restrictions.

"Of the nine more or less in favor, four require a guarantee fund of \$200,000.

"Of the twelve more or less opposed, five consider \$200,000 as the sum necessary to warrant the trial of the experiment, if it is to be tried at all."

It is thus evident that the largest number who thoroughly agree with one another is seven, who are strongly opposed to the plan, and that a majority (twelve) are more or less opposed to it. We fail to make out how many are strongly in favor of the plan, but it is clear that it is a small minority.

It is in the face of these facts that the majority of the committee affirm that their opinion is based "upon consultation with the professors and teachers of the Medical School, and upon individual expressions of opinion from the members of the Massachusetts Medical Society." It seems to us that they are acting in defiance of both.

The majority recommend the acceptance of Miss Hovey's offer on the following conditions:—

"That, after the completion of a new building, women be admitted to the Medical School as an experiment for a period of ten years. That they be not less than twenty-two years of age. That the requisitions for admission and the course of study be the same as for men. That the examinations for women and men shall be identical. That nothing shall be countenanced which will in any way lower the standard of the school, or affect the execution of the plans laid out for its development. That the courses of lectures in which students take no active part be open to both men and women; that for personal instruction in laboratories and for recitations the two sexes be separated; and that a complete separation be made in such subjects as obstetrics, the diseases of women, certain portions of anatomy and physiology, and the like."

They believe that sixty or sixty-five thousand dollars would be sufficient to meet the expense caused by the experiment, but that a considerable endowment would be necessary should the plan be permanently adopted.

Dr. Russell's report is a truly admirable one. It shows the omissions and inconsistencies to which we have alluded in the majority report. It points out that, much as the school has done for medical education, the faculty are not yet satisfied with its course, and desire still further advances.

"It is urged that the present is an unfavorable time for the trial of a new experiment which may interfere seriously with those now in progress, and postpone indefinitely some of the important improvements proposed. It is held that the permanent interests of the school, and of the large classes of male students, for whom it was originally established, and to whom it must always look for its chief support, ought not to incur any additional risk at this critical period of its history."

Dr. Russell calls attention to one practical point which we are surprised the majority should have overlooked:—

"It is estimated that the time required for the studies which, by the plan of the majority of the committee, would be pursued separately by women amounts to about four fifths of the time occupied by the whole course. A school for men, which, while in terms admitting women, excludes them from attendance upon so large a number of exercises, and requires separate instruction in so many branches, would be less advantageous to women than a school established exclusively for their own sex."

He recommends the establishment of a distinct school for women.

We trust the overseers will take speedy and decisive action. We are anxious to know whether Harvard intends to remain true to her boasted policy of steadily improving medical education by methods of acknowledged worth, or whether for a "consideration" she will experiment with whatever theory may be the fashion of the day.

MEDICAL NOTES.

—The physicians and surgeons of the City Hospital gave a dinner at the Union Club to Dr. Edward Cowles on the 19th of April last, on the occasion of his leaving the hospital to be superintendent of the McLean Asylum, at Somerville. Thirty-two gentlemen, comprising the consulting board, the staff, and the physicians and surgeons to out-patients, with their guest, sat down to dinner, Dr. C. D. Homans presiding. During the evening Dr. Cowles was presented with a coffee-set of silver, suitably inscribed. No formal speeches were made, but the esteem and regard of the company for one who had served the hospital so honorably in the trying years just passed were warmly and forcibly expressed.

—The annual meeting of the Worcester District Medical Society was held in their hall in Worcester on the 14th inst. Dr. F. D. Brown of Webster was re-elected president, Dr. G. J. Bull secretary, Dr. L. S. Dixon librarian, Dr. L. Wheeler treasurer. The annual oration, on Fashion in Medicine, was delivered by Dr. J. O. Marble of Worcester. About fifty members afterwards sat down to a social dinner at the Lincoln House.

—Dr. L. P. Blackburne has been nominated by the democrats of Kentucky as governor. Although something of a politician, his success seems to have been mainly due to gallant efforts last summer to keep yellow fever out of the State. The nomination appears to have been received with great satisfaction by his colleagues throughout the State, and the *Louisville Medical News* says: "Doctors in plenty have indeed been in politics, at home and abroad, and have won high honors in the State, but we know of no other instance where a doctor has been given the highest office in the gift of the people as a reward for professional services."

—In our last number we gave a simple announcement of the death of Dr. Charles Murchison, of London, whose influence as a physician, writer, and lecturer has been unusual. He died suddenly, of heart disease, while engaged in seeing his private patients. In Dr. Murchison, not only England, but the entire professional world, loses an invaluable man. His judgment was so reliable that his opinion was unquestioned. As a lecturer he inspired the utmost confidence, and his clearness and careful precision in presenting the points of

a case will not soon be forgotten by those who enjoyed the privilege of his instruction. In the fitting words of the *London Lancet*, "Dr. Murchison was not merely an accomplished physician, but a good, great, and wise man."

—The *Journal of the Royal Microscopical Society* says: "Dr. Helmholtz believes that even with further improvements in the construction of objectives, and the assistance afforded by the immersion and reflex illuminators, no great increase in the resolving power of the microscope will be obtained."

—Dr. Risdon Bennett has been re-elected president of the Royal College of Physicians of London.

NEW YORK.

—A case of considerable interest to the profession has for several days been going on in the supreme court circuit. This was a suit brought by Mrs. Mary Ann Proctor against the Manhattan Eye and Ear Hospital for \$50,000 damages for loss of her eyesight, as the result of alleged unskillful operations for glaucoma of both eyes while an inmate of that institution. After the conclusion of the testimony for the defense, which included the evidence of Drs. Roosa and Loring (who performed the operations), as well as that of a number of other prominent physicians, surgeons, and eye specialists, motion was made to dismiss the complaint without submitting the case to the jury, on the ground that the surgeons gave their services gratuitously, and exercised ordinary care and diligence, which was all that was required of them. This was promptly granted by Judge Lawrence, before whom the suit was tried, who held that the act of 1869 creating the institution constituted it a *quasi* public corporation of a charitable nature, and decided (principally upon the authority of a similar case in Massachusetts) that such a corporation, the object of which was to provide a general hospital for the treatment of diseases of the eye and ear, having no capital stock or provision for making dividends or profits, deriving its funds mainly from public and private charity, and holding them in trust for the object of sustaining the hospital, after having exercised due care in the selection of its agents, was not liable for injury to a patient caused by its agents' negligence, if negligence was established. Furthermore, he said, there was no proof whatever that the surgeons who treated the patient were unskillful or negligent. On the contrary, they were shown by the testimony of men most eminent in the medical and surgical profession to be especially skilled, and the evidence was uncontradicted that they had exercised care and diligence in the exercise of their skill in this patient's case. But even if they had made a mistake of judgment, it would not justify submitting the case to the jury. The burden of proof was on the plaintiff to make out a *prima facie* case, and this had not been done.

—The reports that yellow fever has appeared in Hayti, and that it may become prevalent in other portions of the West Indies, have caused the quarantine officers to take unusual precautions in regard to vessels coming from these quarters. Two schooners have recently arrived from St. Marc, Hayti, and on one of them the cook died from a fever at least resembling yellow fever in its symptoms, while the mate was also ill from the same, but recovered. The steamship *Andes*, which was the first passenger vessel to arrive from the West Indies since it was reported that yellow fever prevailed in epidemic form in the cities of Port-au-Prince and St. Marc, came in on the 14th of May. If she

had arrived one day later, she might have been detained at lower quarantine, since the law relating to the quarantining of vessels arriving from infected ports goes into effect on the 15th of May each year. As it was, she was detained only long enough to be inspected by the health officer and thoroughly fumigated. There was no sickness of any kind on board, and the officers reported that the Haytien officials all denied that yellow fever prevails as an epidemic anywhere on that island. The *Andes* arrived at Port-au-Prince on the first of May, and did not stop at St. Marc on her return voyage.

— E. B. Treat, of New York, will shortly issue a series of photographic illustrations of skin diseases, edited by Dr. George Henry Fox. They will be selected from a large number of photographs taken from selected cases in several of the large dispensaries and hospitals. They will be colored by a medical artist of experience. The work will be issued in twelve parts, and will contain forty-eight plates.

CHICAGO.

— At the last meeting of the West Chicago Medical Society, the president and secretary (Drs. Bridge and Bedfield) were reelected.

— Professors Gunn, Miller, and Ross, of Rush College, and Dr. G. M. Chamberlin, of St. Luke's Hospital, are preparing to sail for Europe on the 28th inst., to be absent about three months.

— Professor Parkes is now in London, observing the surgery of the hospitals. He returns in the fall.

— Dr. O. C. Oliver has just returned from a sojourn of a year in Europe, where he has pursued the study of histology.

THE AMERICAN MEDICAL ASSOCIATION.

MR. EDITOR. — One of the resolutions adopted by the American Medical Association speaks of Atlanta as the Queen City of the Empire State of the South, and we must admit that it was no ordinary provocation that could lead this sedate assembly and still more staid author of the resolution thus to break out into poetry in a friendly way; there must have been something unusual in the character of the people, in the situation of the city, and in the greeting of its physicians, or all combined, which was calculated to inspire unusual sentiments in hyperborean hearts. Let us speak first of the entertainments offered by the physicians and citizens of Atlanta, and, in conclusion, of the natural advantages and attractions.

On Tuesday, May 6th, in the evening, the members of the Association were invited to call upon Governor Colquitt, at his residence, where they were very cordially received. On Wednesday evening a number of receptions were given by the prominent citizens of Atlanta, when at least a dozen bright and cheerful homes, that would have been considered an acquisition to any city in the Union, were thrown open to the doctors, who were for the time considered as the guests of the city. From nine to twelve o'clock, there was a kaleidoscopic succession of handsome and refined ladies, dazzling drawing-rooms, pyrotechnics and Chinese lanterns, love and lobster salad, chit-chat and champagne, sufficient to make the too susceptible portion of the company feel that there was some

witchery about it, or that they had entered the land of the lotus-eaters; even those who are generally considered to be less impressible were surprised and gratified and honored by the hearty hospitality and the unmistakable warmth of their welcome.

On the evening of Thursday, May 8th, a grand banquet was given at the Kimball House, at which over five hundred guests were seated; it was said to have been the finest entertainment ever given in Atlanta. The members of the American Medical Association and of the Public Health Commission received invitations, and both bodies were well represented. The character of the toasts given and the responses were largely national and patriotic, and the sentiment offered by Dr. Davis, that he would recognize no East and no West, no North and no South, but only America, one and indivisible, which was received with universal applause, was repeated in various forms through the evening, always with the same effect. The following were the toasts:—

Atlanta welcomes her Guests, Hon. Wm. Lowndes Calhoun, mayor of Atlanta. Regular Toasts: (1.) The American Medical Association, Dr. N. S. Davis, of Chicago. (2.) Our Retiring President, Dr. Theophilus Parvin, of Indiana. (3.) Our President Elect, Dr. Louis A. Sayre, of New York. (4.) The Sanitary Commission, Dr. J. L. Cabell, of Virginia. (5.) Our Martyr Dead (The traditional heroism of the Profession fitly illustrated by the recent noble accessions to the Roll of Honor), Dr. S. M. Bemis, New Orleans. (6.) The Atlantic Coast, Governor Alonzo Garcelon, of Maine. (7.) The Pacific Slope, Dr. R. B. Cole, of California. (8.) Our Northern Lakes, Dr. O. W. Wight, of Wisconsin. (9.) The Gulf States, Dr. H. W. Brown, of Texas. (10.) Our Common Country, Dr. Eugene Grissom, of North Carolina. (11.) The Nestor of American Surgery, Dr. Samuel D. Gross. (12.) The Ladies, Dr. Montrose A. Pallen, of New York.

These were followed by volunteer toasts, among which was one to The Entertainment Committee, offered by Dr. A. N. Bell, of New York.

The banquet broke up at a late hour, and the company dispersed with evident reluctance. The music was furnished by a United States military band belonging to an artillery company located in the city.

On the following evening the citizens tendered a grand reception to their guests at the Kimball House, where there was an unusually fine collection of young ladies, and dancing continued until it was nearly time to escort some of the visitors to the early train, which left about five o'clock. This and other circumstances seemed to afford some ground for the statement, made by one of the delegates on the succeeding day, that Atlanta was a first-rate place for eating or drinking, but a poor place for sleeping, as he had not slept eight hours since he came into the place.

On Saturday a number of delegates accepted the invitation tendered by the citizens of Augusta to the Association to visit that city, and attend a "Georgia barbecue." The weather was delightful, and everything was favorable to their enjoying their visit. Some of the delegates before returning home visited Stone Mountain, which is visible from Atlanta; others went to Chattanooga and Lookout Mountain, and quite a number went to Danville, Kentucky, where on the 17th inst. a statue of Ephraim McDowell, the founder of ovariotomy, will

be uncovered, Professor Gross having promised to deliver an oration on the occasion.

The recollections that these visitors carry home with them are of the most agreeable character. The cordiality of the people, their enlightened public policy and progressive spirit, the many natural advantages of Atlanta, and its superior climate must inevitably attract immigration; it is a city with a future, and truly deserves the title given to it by Dr. Logan as the "city of great possibilities." Thirteen years ago Atlanta had scarcely half a dozen habitable houses, the fortunes of war had overtaken it, and the city was literally burned to the ground. In the comparatively short period that has elapsed since that time, it has become a large city, with nearly forty-two thousand inhabitants, and growing at the rate of eight thousand to ten thousand each year. Since 1869 it has been the capital of Georgia, and being in addition an important commercial centre there is no reason why it should not continue growing. The climate is dry, the air pure, and the water is freestone, and in some places decidedly chalybeate. Atlanta is situated in a mountain region, on the last spur of the Blue Mountains, and the hills in the neighborhood give it most picturesque surroundings. It is said to be about ten hundred and fifty feet above the level of the sea, the thermometer rarely exceeds 85° F. in the summer, and the nights are always cool; during the winter the weather is cold and clear, but always keeps at a respectful distance from zero. The advantages of Atlanta as a health resort are many: the markets are well supplied, and as good a table can be found there as in cities further north, but with the advantage of early fruits and vegetables, strawberries being shipped from Florida in February. Living is quite cheap.—good board can be obtained at twenty dollars a month; the supply of fresh, pure air and wholesome water and food is unlimited. The Ponce de Leon spring is a pleasant place of resort, about three miles out of the city, where is found a chalybeate spring situated in a charming grove.

The statement of the oldest inhabitant is that pulmonary consumption is always imported, as it never originates here; no epidemic has ever invaded the city; and it is entirely free from yellow fever and malaria, except in the case of invalids or refugees from the surrounding country, who sometimes come here as a health resort,—about four or five cases of yellow fever having been all that were seen in Atlanta during the great epidemic, and these having rapidly recovered after reaching the city. The only complaint of the place comes from the doctors, who say that it is too healthy. With the exception of the beds for the accommodation of surgical patients operated upon at the clinic of the Atlanta Medical College (which is closed during the summer), there is no public hospital in Atlanta.

Owing to the commanding position of this city as a commercial centre, it is thought that students of medicine can be brought here by increasing the facilities, and it is said that the ground is already purchased for another medical institution, to be called the Southern Medical College, which is to have a public hospital connected with it. It is expected to be ready for students next fall.

Georgia hospitality to those who have experienced it is synonymous with all that is free, open, and warm-hearted. As a further intimation of the sentiments of the people, and an assurance that visitors are made welcome, I can-

not close this letter in any better way than by quoting a paragraph from the *Southern Enterprise*, a journal published in Atlanta, whose object is "the development of the material resources of our country: " —

"We wish our Northern friends to know more of us, and we wish to see more of them come to make their homes among us. We believe that a mutual interest is involved in this. We are concerned with no real-estate agency, and have no lands to sell. We labor for the public good, incited by higher motives than mere self-interest. We love our country, and desire to see it prosper. We believe that a large influx of industrious Northern citizens will not only conduce to the material development and prosperity of the South, but contribute to the interest, fortunes, and happiness of the immigrants, and to the harmony, prosperity, and permanence of the Union. We need to know each other better to remove sectional prejudice, misunderstanding, and distrust, excited by unscrupulous, designing politicians." (April, 1879.)

Believing that this expresses the liberal and progressive spirit of the people, I feel assured that immigrants are wanted and will be welcomed. F. W.

ATLANTA, May 10th.

REPORTED MORTALITY FOR THE WEEK ENDING MAY 10, 1879.

Cities.	Popula- tion estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from					
				The Princip- al "Z" malar- ial Diseases.	Typhoid fever.	Scarlet Fe- ver.	Diphtheria and Croup.	Diarrhoeal Diseases.	
New York.....	1,085,000	509	24.46	22.59	11.78	8.25	4.52	1.96	
Philadelphia.....	901,380	296	17.12	12.50	8.78	3.04	1.86	8.94	
Boston.....	564,400	160	14.78	15.00	7.50	2.50	5.63	1.25	
Chicago.....	—	127	—	22.04	7.69	6.29	8.66	1.58	
St. Louis.....	—	85	—	14.12	10.59	—	1.18	2.35	
Baltimore.....	365,000	126	18.00	15.08	7.14	3.18	5.55	—	
Boston.....	360,000	123	17.81	10.57	9.76	—	4.07	3.25	
Cincinnati.....	—	83	—	27.71	8.43	15.67	4.82	—	
District of Columbia.....	160,000	83	27.01	15.68	9.64	1.21	2.41	2.41	
Cleveland.....	—	51	—	9.80	15.69	1.96	3.82	1.96	
Pittsburgh.....	—	49	—	18.37	6.12	4.08	10.24	—	
Milwaukee.....	—	—	—	—	—	—	—	—	
Providence.....	101,000	33	17.03	18.18	3.03	3.03	9.09	—	
New Haven.....	60,000	—	—	—	—	—	—	—	
Charleston.....	57,000	26	23.78	3.85	3.85	—	—	3.85	
Nashville.....	27,000	12	23.17	25.00	—	—	—	8.33	
Lowell.....	25,500	—	—	—	—	—	—	—	
Worcester.....	52,500	13	12.91	39.77	—	—	7.69	7.69	
Cambridge.....	51,400	16	16.22	12.50	12.50	—	6.25	6.25	
Fall River.....	48,500	—	—	—	—	—	—	—	
Lawrence.....	38,200	13	17.75	15.39	15.39	—	15.39	—	
Leicester.....	34,000	16	21.54	6.25	25.00	—	6.25	—	
Lyons.....	31,500	8	12.24	25.00	—	—	25.00	—	
Springfield.....	27,000	11	21.24	39.36	27.27	8.33	18.18	—	
New Bedford.....	25,400	12	23.70	25.00	—	—	8.33	—	
Salem.....	23,350	10	22.33	10.00	39.00	—	—	—	
Somerville.....	20,800	4	15.04	16.67	—	—	16.67	—	
Chelsea.....	20,200	5	12.91	—	20.00	—	—	—	
Taunton.....	18,200	10	28.65	29.00	—	10.00	—	—	
Haverhill.....	17,100	6	18.29	—	50.00	—	—	—	
Gloucester.....	17,100	4	12.29	—	—	—	—	—	
Newton.....	15,300	6	20.45	—	16.67	—	—	—	
Haverhill.....	13,500	6	23.17	16.67	16.67	—	—	—	
Newburyport.....	12,500	6	25.03	—	—	—	—	—	

One thousand nine hundred and eleven deaths were reported: 331 from the principal "zymotic" diseases, 293 from consumption, 184 from pneumonia, 87 from diphtheria and croup, 87 from scarlet fever, 50 from bronchitis, 36 from diarrhoeal diseases, 30 from whooping-cough, 28 from typhoid fever, 21 from erysipelas, 13 from malarial fevers, 11 from

measles, 11 from cerebro-spinal meningitis, four from intermittent fever, three from remittent fever, none from small-pox: indicating a considerably decreased mortality from all causes, pulmonary diseases, total zymotic diseases, and especially from scarlet fever; increased from whooping-cough and typhoid fever. From *laurel* s. 23 deaths were reported in New York, six in Brooklyn, five in Boston, three in Philadelphia and St. Louis, two in District of Columbia and Providence, one in Chicago, Cleveland, Cambridge, Salem, Holyoke, and Newton. From *whooping cough*, 21 in New York, three in District of Columbia, two in Boston and Cincinnati, one in Brooklyn and Somerville. From *typhoid fever*, eight in Philadelphia, three in Chicago, two in New York, Brooklyn, Baltimore, District of Columbia, Providence, Nashville, and New Bedford, one in Worcester, Salem, and Holyoke. From *erysipelas*, six in Philadelphia, four in New York, two in Brooklyn, Chicago, St. Louis, Boston, and Cincinnati, one in Baltimore. From *malarial fevers*, nine in New York, four in St. Louis. From *measles*, three in Baltimore, two in New York, St. Louis, and Pittsburgh, one in Brooklyn and Cleveland. From *cerebro-spinal meningitis*, two in New York, Chicago, and Cincinnati, one in Philadelphia, Baltimore, and District of Columbia. From *intermittent fever*, two in Brooklyn and District of Columbia. From *remittent fever*, one in Baltimore, Brooklyn, and District of Columbia. Pulmonary diseases were prevalent in the large Southern cities, but no zymotic diseases to any considerable extent; diphtheria still prevailed in Buffalo and Pittsburgh. In seventeen of the nineteen cities of Massachusetts, pneumonia and diphtheria continued the most prevalent of the acute diseases, the mortality from the latter and from scarlet fever decreasing.

The weather was generally reported fine, with a few showers here and there, the meteorological record for the week in Boston (latitude 42° 21', longitude 71° 4') being as follows:—

Date.		Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.			Rainfall.	
		Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in Inches.
May 4		29.858	54	67	41	59	39	63	54	SW	SW	S	8	18	19	C	F	O	—	—
" 5		29.734	63	76	50	60	32	46	46	SW	SW	SW	11	10	10	H	F	C	—	—
" 6		29.916	58	67	50	71	61	35	55	O	SE	NW	0	8	16	H	F	F	—	—
" 7		30.106	54	66	46	66	53	48	49	W	NW	N	16	16	12	C	F	F	—	—
" 8		30.329	54	60	46	67	48	56	57	NW	SE	SW	6	6	11	C	F	C	—	—
" 9		30.515	55	62	45	72	58	47	53	N	E	SE	2	5	5	C	C	C	—	—
" 10		30.460	54	60	45	59	59	33	45	O	SE	S	9	12	8	H	C	C	—	—
Week.		30.131	56	76	41				54	SW			1407 miles.							

1 O., cloudy; C., clear; F., fair; G., fog; H., haze; R., rain; S., snow; T., threatening.

For the week ending April 19th, in 149 German cities and towns, with an estimated population of 7,507,505, the death-rate was 28.2, an increase of 0.2 from the previous week; scarlet fever and whooping-cough showing greater fatality, and typhus fever less. Four thousand and seventy-eight deaths were reported: 689 from consumption, 507 from acute diseases of the respiratory organs, 159 from diarrheal diseases, 140 from diphtheria and croup, 77 from whooping-cough, 54 from scarlet fever, 50 from typhoid fever, 37 from measles, 21 from puerperal fever, 12 from typhus fever, one from small-pox (in Berlin). The death-rates ranged from 17.3 in Kiel to 42.7 in Gölitz.

For the week ending April 26th, in the 20 English cities having an estimated population of 7,184,990, the death-rate was 24.9, a decrease of 1.0 from the previous week, the excessive mortality from pulmonary diseases still declining. Three thousand five hundred and twenty-nine deaths were reported: 491 from diseases of the respiratory organs, 147 from whooping-cough, 81 from scarlet fever, 80 from measles, 42 from diarrhoea, 38 from fever, 28 from diphtheria, 10 from small-pox (in London). The death-rates ranged from 17.2 in Bradford to 24.5 in Worcester. Small pox remains about the same in Dublin (nine deaths for the week).

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LECTURES.

BOSTON CITY HOSPITAL: CLINICAL LECTURE NO. XIV.

BY DAVID W. CHEEVER, M. D.,

Professor of Clinical Surgery in Harvard University.

Case illustrating the Use of Galvano-Cautery. — GENTLEMEN: I bring before you the patient upon whom I operated eight weeks ago, for malignant disease of the tonsil. Attached to the palatine arch posteriorly, there is already a recurrence of the disease, but in a more rapid form than the original. In character it is soft, succulent, and cellular, and not in a condition for removal. But I shall cauterize it by means of the galvano-cautery. I advise the patient not to take ether because of the danger of its ignition in the pharynx. Here are the scars, quite healed, of the first operation, the result of which has been a slight loss of power in the lower lip, but no other paralysis.

By means of a loop of platinum wire, which I pass around the growth, I now remove the greater portion of it, the loop having by its intense heat left a clean surface without drawing one drop of blood. I now proceed to kill the remains of the morbid excrescence with a white-hot point composed of twisted wire. I puncture in all directions, and by this form of treatment do not cause nearly so much pain as I should in using the nitrate of silver. It is also very useful and very satisfactory in cases of hæmorrhoids, of which the next patient affords an illustration.

Hæmorrhoid. — This middle-aged woman came to the hospital for some rectal trouble, said to be piles. As yet I have made no examination. I now find a small external hæmorrhoid, which, as you see, might be easily removed with the scissors. But since we have the galvano-caustic battery in readiness, we will use that. Inside the sphincter muscles, excepting a slight irritation and ulceration, there is no trouble whatever. With the finger in the vagina it is easy to push out and into view the rectal mucous membrane. You observe that it looks very well. I see no other masses. The only additional thing of which the patient complains is ruptured perinaeum. But so much repair has taken place that nothing more is required. I operate simply by throwing a loop of wire around the growth, and then, making connection with the battery, I

gradually draw upon this loop, — now red hot, — and the pile is quickly burned off, leaving a dry and clean surface. I use this case only as an illustration of the usefulness of the battery. As previously remarked, the pile might easily have been snipped off with scissors. But the throat case could not in any other way have been so thoroughly treated.

Prostatitis and Abscess. — With this young man we complete the list of the urinary cases which have come before us this winter. We have had every disease of the urethra, and, with one exception, have had every operation, the exception being internal urethrotomy. We have been able to show you the treatment of retention by aspiration over the pubes, by tapping through the rectum, by the straight knife thrust through the perinæum (Cox's operation); the treatment of stricture by gradual dilatation, divulsion, and by perineal section; phymosis, paraphimosis, and the operation for stone in the bladder. We now have a case of prostatic abscess.

We have here a young man in a debilitated condition, who is a hotel waiter, and therefore is on his legs all day long. Four weeks ago he contracted a gonorrhœa, and, being anxious to keep his situation, he used some form of abortive treatment upon himself, and thus converted a simple gonorrhœa into this condition. He has several times called at my office, and finally consented to come here. He told me that after he had used the abortive injection blood began to flow; he was forced to urinate very often, this lump soon formed, and tenesmus came on. He can pass water with difficulty, but cannot defæcate. One week ago he came here, and Dr. Bowles passed a catheter. There could not, therefore, at that time have been much stricture. What is the explanation of the patient's condition? Imagine a cold in the head. In the first stage there is congestion; the mucous membrane is full, injected, and tense, and the patient feels as if there were a nasal stricture. Now transfer these conditions and similar sensations to the urethra; the patient knows what is coming, and runs for a strong injection. If in the early stage of nasal catarrh we were to throw a strong solution of nitrate of silver up into the nose, what would follow? Why, *inflammation*, even up into the frontal sinuses. So in gonorrhœa harsh treatment will lead to stricture, retention, irritable bladder, and to abscess, which generally pushes up in front of the triangular ligament, into the scrotum and upon the abdomen. In this particular case we do not find such a result, but here is a hot, hard, red lump prominent in the perinæum, and lying between the rectum and the prostate gland, which by pressure posteriorly prevents a movement of the bowels. Hardly anything else could create this condition, except a fall astride of some hard body, which might set up abscess of the perinæum. I remember one case, however, of a slender young man who, as I believe, developed a perineal abscess by prolonged riding upon a velocipede. This is so rare that it would not occur once in a hundred times.

In this case I expect to find pus, but will first attempt to pass a catheter into the bladder. If the difficulty here were simply a cellulitis, the patient would be spared a worse trouble. If due to urinary infiltration, then we shall eventually have a fistula. The gonorrhoeal secretion is still evident and plentiful, showing that inflammation exists along the urethra. The catheter passes with comparative ease, and I find no connection between the abscess and the urethra. Therefore, the case promises well, and the patient may escape with only an external abscess. It is proper to keep the catheter in the bladder while we open the abscess. I expected pus, and, having made the incision, here you see it. I find this is a prostatic abscess, which has formed between the membranous portion of the urethra and the prostate gland, leads down to the perinæum, and may rupture into the rectum. Since it has no connection with the urethra which we can discover, the treatment will consist in poulticing the abscess, and keeping it in a discharging condition. We shall also treat the gonorrhœa with copaiba and demulcents. In reality the affection is a prostatitis caused by strong injections which have set up inflammation in the urethral neck of the prostate, and from which it extends backward and forward.

[NOTE. Five days later, urine began to leak through the abscess.]

Glandular Abscess. — In the superior carotid triangle of this patient is a swelling which has existed several months, and is steadily increasing in size. It may be a wen. I have some doubt as to what it is, but think it is one of a chain of glands, because the glands behind the sterno-cleido-mastoid muscle are also enlarged. If it prove to be a cyst I shall excise it. If it be a mass of glands with ulcerating centres I will enucleate them. In a leucocythæmic patient removal of the glands should be one remedy, if we may believe the theory of Virchow, which is that the glands are manufactories which throw white corpuscles into the blood. Enucleation of the enlarged glands, then, would aid in preventing an increase of the leucocythæmic condition. In some cases, after excision, the glands reappear with much rapidity. I recall the case of a boy in whom extirpation of the glands was followed by enormous enlargement of the axillary glands, and eventually was the cause of death.

I incise this swelling and find pus, which would not be the case if this were an ordinary wen; such a cyst would be filled with cheesy masses.

On exploration I discover that this is an agglomeration of enlarged glands broken down into a purulent cavity, which has an outlet in an upward direction. I shall therefore freely open the swelling. Having done this, I can see that the bottom is composed of softened tissue and sloughing lumps, which being turned out leave a large cavity containing broken-down glands, which will suppurate and slowly heal over.

The after-treatment will consist of cod-liver oil and iron.

Wen. — The next patient, a female, presents a good illustration of the other form of swelling, — I mean the wen. It is on the scalp, and you can readily see the difference between it and the swelling I have just opened. As you probably know, a wen is an obstruction of a hair follicle. It has the peculiarity of appearing in crops; that is, where there is one wen, there will generally be found several others.

The treatment requires evulsion of the sac; otherwise the wen will return. In removing wens from old people caution is needed, because of the danger of erysipelas.

In this case I find one large and one small wen. I have seen one of such immense size that it hung down the neck; something not seen nowadays, for the wen is usually brought for treatment early in its growth. The patient has previously had four of these tumors removed. No ether is needed. The first incision should split the wen through. The contents, as you see, are cheesy. I now dissect out the sac. The incision will do better without sutures; we simply draw the lips together, and apply compression by means of a sponge.

Fatty Tumor of the Back. — Here is a soft, lobulated, movable mass beneath the skin and over the ribs, just below the angle of the scapula. It is probably a fatty tumor, — a mass of fat developed in the cellular tissue.

The treatment is incision and enucleation, partially by tearing. The tumor should be brought away whole. The locality of the growth affords convenient opportunity to use the antiseptic treatment, which I shall adopt. Under the spray I make an incision in the direction of the upper layer of muscular fibres, namely, obliquely toward the shoulder. With a little dissection the tumor is easily removed. You will notice that this form of tumor has a capsule, which envelops the growth, and from which, also, it can easily be torn. In this case it has reached the aponeurosis of the muscles of the back, which are here revealed.

The vessels I partly twist, and partly tie with carbolized catgut. I put in a drainage tube, and close the wound with carbolized silk sutures. The Lister dressing is now to be applied.

[NOTE. One week later this patient was exhibited, with the wound closed by first intention, except at the point where the drainage tube came out. Neither inflammatory redness nor pus were to be seen. The patient walked into the amphitheatre in good health.]

THE LIMITS OF PERCEPTION OF MUSICAL TONES BY THE HUMAN EAR.

BY LAURENCE TURSBULL, M. D.,

Aural Surgeon to the Jefferson Medical College Hospital, Philadelphia; Physician to Howard Hospital, etc.

IN many cases of ear trouble it is desirable to have means of determining the acuteness of hearing, both for ascertaining the present condition of the aural apparatus, and for the establishment of data that shall be sufficiently accurate to determine and record the progress of the patient from day to day, and to establish a standard of comparison with other cases. For this purpose the steel rods of Dr. König, of Paris, afford in many respects the most readily available and convenient means either for clinical or office use. The rods employed by me in these experiments were made of choice, white, tempered steel, under the direction of Dr. Clarence J. Blake, of Boston, and have proved perfectly satisfactory. These are held suspended by a silk thread, either close to the ear, or at a definite distance, say thirty-five feet, from the patient, and then tapped on the end with a little steel hammer, which causes a clear, ringing over-tone like a bell. They are two cm. in diameter, and from one to four inches in length, so that they regularly increase from twenty thousand to sixty thousand vibrations in the second, according to their size. This method of examination only determines the limit of the power of perceiving musical tones, or what is technically called the pitch; it is not intended to supersede the tuning-fork, or the ticking of a watch, or even the use of the voice, which determines the power of recognition of the quality and of the intensity of sounds.

In Savart's classical experiments with the toothed wheel, the *lowest* distinctly musical note was determined to be one of eight vibrations in a second; the *highest* was estimated at twenty-four thousand vibrations per second. Helmholtz fixed the lowest limit at sixteen, and the highest at thirty-eight thousand. Vierordt considered the highest to be forty-eight thousand, and Desprets as seventy-three thousand seven hundred. Dr. Blake found the perceptive power of the normal ear to vary considerably with the age, being greatest at the age of twelve or thirteen years, and diminishing in advanced life.

From a number of experiments made some years ago,¹ and those I have made since, I have obtained some interesting results. In the first place, my extended experience with this means of testing the acuteness of the hearing has further confirmed me in my preference for König's rods. In using them I observe the precaution to have their tempera-

¹ See Proceedings of the American Association for the Advancement of Science, Hartford meeting, August, 1874.

ture at different observations to correspond as nearly as possible, in order to prevent any source of fallacy from their change in shape.¹ In the second place, the tympanum should always be previously examined, and if any morbid condition exists it should be entered in the notes in recording the observation; of course, if the canal be obstructed by cerumen or any morbid growth, no satisfactory determination can be made until after it is cleared.

Observing these precautions, I have found that the averages of each set of my experiments, while they varied slightly from each other, were generally higher than those of Dr. Blake. In one case sixty thousand vibrations were heard by a gentleman twenty-six years of age, who was a skilled musician, and another gentleman, with a trained ear, distinguished the same tone; in quite a number fifty thousand were readily detected; in others twenty-five thousand was the extreme limit of perception. Many who were found to fall far below the average had never suffered from ear trouble, and believed their hearing to be perfectly normal. It would appear that there are a certain number of persons who are naturally insensible to sounds above a certain pitch, just as there are some who cannot distinguish between different-colored rays of light of high refractive powers, — that there is a Daltonism of the ear as well as of the eye. The analogy existing between the ability to recognize colors and that of discriminating between different musical tones has been frequently observed, and Dr. Pliny Earle² has collected an interesting series of cases, in which the two defects coexisted in the same individual (that is, where a person who was color-blind also had “no ear for music”). Apart from these exceptional cases, I have concluded from a number of observations that education of the ear has much to do with the acuteness of hearing; this is so true that a person who first tests his hearing with the rods may find that he is unable to distinguish tones higher than a certain pitch, say thirty thousand per

¹ Nor should it be overlooked that the conducting power of the air is greatly affected by its temperature. It will be interesting in this connection to compare the results obtained under different temperatures. If air be heated it expands and becomes lighter, and the sound travels more rapidly than through cold air. The late M. Wertheim determined the velocity of sound in air of different temperatures as follows: —

Temperature of Air.	Velocity of Sound.
1.5° Centigrade (34.7° F.)	1089 feet.
2.10 “ (35.8° F.)	1091 “
8.5 “ (47.3° F.)	1109 “
12.0 “ (53.6° F.)	1113 “
26.0 “ (78.8° F.)	1140 “

At a temperature of one degree and a half above zero, the velocity is 1089 feet a second; at a temperature of 26.6 degrees it is 1140 feet a second, or a difference of 51 for 16 degrees, that is to say, an augmentation of velocity of about two feet for every single degree centigrade. Augmentation of density always produces a diminution of velocity.

² *Am. Jour. Med. Sciences*, vol. xxxv., from Carpenter's *Physiology*, page 792. Philadelphia, 1876.

second; but in the course of an hour or so, if he practice with them continually, he may distinguish thirty-five thousand without especial difficulty.

Cases then divide themselves in their acuteness of perception of high tones into three classes: (1.) Ordinary patients, or hospital cases from the lower walks of life, all of whose perceptions are more or less dulled, the ear being no exception. (2.) Cultivated and refined people, who have no special musical training. (3.) Skilled and professional musicians.

Physicians whose ears have been trained in auscultation and percussion, so as to recognize nice distinctions of pitch, would form a class intermediate between two and three. The fact that my observations have been, in a late series of experiments, made largely upon professional men will explain why the general results are higher than those of other observers. I have in another place¹ called attention to the painful character of the impression made by these high tones in some cases. Indeed, an annoying tinnitus may result and continue for several hours, or longer.

In the following series the subjects were all scientific men, either physicians or students. The rods were held within two inches of the ear; their temperature was about 70° F. The observations were conducted in a room remote from noise; weather cloudy and drizzling.

	Years.	Initial.	Vibrations.	
	22	G. H. R.	50,000	
	23	A. De W.	50,000	
	24	D. J.	55,000	
	24	J. M.	40,000	
	24	J. M. S.	35,000	
	24	H. F. S.	55,000	M. ²
	25	J. M. B.	50,000	M.
	26	J. E. F.	40,000	
	26	A. O.	45,000	
From 20 to 30	26	H. P.	60,000	
	28	I. O.	40,000	
	29	J. S. T.	40,000	
	29	C. M. T.	45,000	
	30	F. W.	40,000	
	30	J. E. W.	45,000	
	30	C. S. T.	40,000	
	30	W. S. L.	50,000	
	30	G. A. N.	30,000	
	32	G. McC. ²	35,000	
	36	J. R.	40,000	
From 30 to 50	39	W. K.	50,000	M.
	47	J. A. M.	40,000	
	48	R. M. S.	40,000	
Above 50	52	E. R.	45,000	
	57	L. T.	30,000	

It is of interest to note that in several of the cases where a marked difference was observed between the two ears that it was in favor of

¹ Proceedings of the American Association for the Advancement of Science, Hartford meeting, August, 1874.

² Had ear trouble when a child; there was opacity and sinking in of membrane.

³ M stands for musician.

the left, with the single exception of the case of the gentleman who distinguished sixty thousand with his right ear who could get no higher than fifty-five thousand with his left.

The marked difference between the limit at twenty-two and that at fifty-seven years is believed not to be simply due to senile thickening of the membrana tympani, but also to a gradual narrowing and change of shape in the auditory meatus, together with alterations in the middle ear, and diminished susceptibility of the auditory nerve incident upon advancing years.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.¹

BY R. H. FITZ, M. D.

PATHOLOGICAL ANATOMY.

Jaundice from Urobiline. — In 1857 a special form of jaundice was described by Gubler under the name "*ictère hæmophéique*," and characterized by the absence of ordinary biliary coloring matter from the urine. The clinical features of this form of icterus and its distinction from ordinary jaundice have recently been stated elaborately by Dreyfus-Brisac. According to him, the color of the skin is of a dirty yellow or pale yellow, without the greenish tint which is usually present in ordinary jaundice. There is neither itching nor a slow pulse; the stools are not clay-colored, and the urine is of an amber-yellow or brownish yellow, without any greenish tint, and stains linen of a pale salmon color. The nitrous acid test of Gmelin produces no specific reaction, and merely a reddish-brown hue results in the addition of nitric acid. Chloroform extracts from the urine a brownish-red coloring matter, which becomes of a rose color when acted upon by nitric acid.

This statement of two forms of icterus corresponds with the view which has long been entertained that a jaundice may exist independent of any direct participation of the liver, and due to the transformation of blood pigment which has been set free by the destruction of numerous red blood corpuscles, — a destruction expressed by the terms hæmatogenous and hepatogenous. Poncet was the first to demonstrate that jaundice follows extensive hæmorrhages, that the discoloration depends upon the modified blood pigment, and that the pigment eliminated with the urine is like the so-called urobiline.

Gerhardt² has also, for several years, repeatedly directed his attention to the examination of the urinary coloring matter in jaundice, and has come to the conclusion that when the urine from cases of icterus

¹ Concluded from page 715.

² Correspondenz-Blatt des allgemeinen ärztlichen Vereins von Thüringen, 1878, xi.; Allgemeine medicinische Central-Zeitung, 1878, xcv. 1187.

does not give the ordinary reactions of biliverdine, its dark color is usually due to an abundance of urobiline. As Poncet's experiments show that the occurrence of extensive hæmorrhagic extravasation gives rise to a jaundice from urobiline, therefore there can be no question of the existence of a hæmatogenous form.

When icterus results from the simple closure of the common bile duct, the urine shows the presence of bilifulvine. In certain diseases of the liver, especially in cirrhosis, the jaundice is caused by bilirubine. The latter usually occurs in cases of heart disease, lead colic, and frequently takes place in pneumonia, hæmorrhagic infarction of the lungs, and acute alcoholism. Mixed forms are of frequent occurrence, and in nearly every case of catarrhal jaundice bilifulvine alone is present in the urine at the height of the disease; but as improvement takes place the presence of this pigment becomes less, while that of urobiline appears; finally, only the latter is evident.

The diagnostic importance of the occurrence of jaundice from urobiline is thus evident, especially as indicative of internal hæmorrhage; and it is also suggested that in icterus neonatorum the pigmentation is likely to arise from the hæmorrhagic accidents of birth, as the cephal-hæmatoma and internal ecchymoses.

Diagnostic Value of the Puncture of Abdominal Cysts. — Spiegelberg¹ calls attention to the relative frequency of the occurrence in ovarian cysts of contents which have generally been regarded as characteristic of parovarian cysts, such contents being a neutral fluid of low specific gravity, poor in albuminates and morphological constituents.

Although in retention-cysts of mucous canals the character of the fluid changes from a viscid to a thin, watery liquid, this transformation meets with a plausible explanation in the alteration of the epithelial lining of the cyst from the constantly increasing pressure upon the inner surface. The specific secretion is thus no longer formed, and a simple serous fluid exists which does not spontaneously coagulate so long as the epithelial lining remains intact, though without specific function.

In the ovarian cyst, however, there is not a simple retention of the material discharged from the wall, but the constituents of the wall grow in proportion to the increase in the volume of the tumor: and while this relation takes place the epithelium continues to produce a gelatinous material. With the cessation of the growth of the wall there is no longer this constantly changing relation between epithelium and contents, but the former becomes short and flattened, and ceases to produce specific contents. The condition of the cyst thus resembles that of the retention-cyst previously referred to. Consequently, the cysts which furnish a thin, serous fluid are to be considered as those whose growth and productiveness are at a stand-still.

¹ Archiv für Gynäkologie, 1879, xiv. 175.

Such a stage may be very early reached in the simple ovarian cysts, especially in the dropsical Graafian follicles, and the cysts of the broad ligament. It may also take place early in single cavities of a multilocular cystoma, so often apparent in the examination of neighboring cavities, some of which contain a thin fluid, others a slightly viscid liquid, while others, again, have firm, gelatinous contents.

This recognition of the frequent thin, watery contents of an ovarian cyst has a decided therapeutic value; for when the puncture permits the complete escape of such a fluid no farther operation should be undertaken, whether the cysts are ovarian or parovarian, as such cysts may subsequently become obsolete, like retention-cysts, if the puncture is made with antiseptic precautions. Extirpation should only be performed when the cavities refill, an event which is probably in all cases the result of an inflammation of the inner surface, occasioned by the puncture.

Tyrosine in the Sputum.—The presence of crystals of tyrosine in the sputum has been recorded by Leyden,¹ who states that two additional cases showing this peculiarity have since come under his observation.

The last two patients were suffering from chronic empyema with perforation of the lung, and in one case leucine, as well as tyrosine, was found in the sputum. The bundles of acicular crystals of tyrosine readily became evident after simply drying a few drops of the purulent sputum upon a glass slide.

It is well known that both leucine and tyrosine are met with in pus, and that they have been found in the exudation in empyema. It therefore becomes of interest to ascertain if any diagnostic importance can be attached to the presence of one or both of them in the expectoration. The fact that tyrosine may be present in the pus of course furnishes no evidence of the origin of the latter, unless it can be determined that the crystals are not seen in considerable quantity in pus which arises in the lung. It is also possible that the crystals may have formed within abscesses, which, arising in other parts than the pleural cavity, eventually communicate with the interior of the lung.

It is furthermore important to determine whether, in all cases of empyema with perforation of the lung, these crystals are always detected, or whether their presence is limited to the more chronic forms, with a certain degree of decomposition of the exudation.

Leyden has sought for tyrosine in a number of cases of abscess of the lung, of putrid bronchitis, and of subacute and chronic pulmonary gangrene, but without success. In the chemical examination of putrid sputum, traces of leucine and tyrosine have been observed by Jaffe, but in the cases reported by Leyden large quantities have been found, and

¹ Virchow's Archiv, 1878, lxxiv. 414.

by very simple means. It is his conclusion, therefore, that in accordance with existing observations the presence of leucine and tyrosine in the sputum suggests as most probable the existence of a chronic empyema with perforation.

Permanent Obliteration of Ligated Vessels. — The changes produced in blood-vessels by ligatures and in consequence of thrombi have long been the subject of experimental investigation, and the method of organization of a thrombus and the manner in which a vessel becomes obliterated have been rendered sufficiently clear by the numerous careful and critical observations of recent workers.

The results have generally been obtained from experiments upon the lower animals, but Raab¹ has made use of a considerable quantity of material derived from man to form an opinion of the nature of the process resulting in the obliteration of the vessels of the human species.

It appears from his investigation that there is no essential difference in the nature of the process from that taking place in the lower animals, and that an inflammatory proliferation of the endothelium and the other layers of the wall of arteries and veins takes place in consequence of the irritation of the ligature and the accompanying wounding of the adjoining soft parts. Therefore a permanent closure of the ligated vessel takes place rapidly and safely only when vessels are healthy; if they are atheromatous, there is either no healing or the process takes place with difficulty. The new-formed tissue which closes the canal of the vessel is at first very cellular and juicy, but later becomes transformed into a dense fibrillated connective tissue. The different layers of the wall also lose their peculiar structure, and finally the obliterated end of the vessel becomes converted into a fibrous cord. A thrombus is not essential to the process, and when present there is no evidence of its organization, but it disappears with the advance of the tissue produced by the wall.

Nodular Periarteritis or Multiple Aneurisms. — Meyer² calls attention to a curious combination of lesions and symptoms which has occurred in a sufficient number of cases to demand general attention. One was reported by Kussmaul and Maier under the term periarteritis nodosa, and was characterized by the prominent symptoms of rapidly advancing chlorosis, wasting, albuminuria, and a progressive general paralysis, with muscular pains. Death took place after a few weeks, and diffuse nephritis, with infarction, necrotic enteritis, and extensive granular degeneration of the voluntary muscles were found, associated with a peculiar thickening, usually in the form of small nodules, of numerous small arteries, not larger than the coronary arteries of the heart.

The arteries chiefly affected were those of the intestines, stomach,

¹ Virchow's Archiv, 1878, lxxiv. 277.

² Virchow's Archiv, 1879, lxxv. 451.

kidneys, spleen, heart, and voluntary muscles; the arteries of the liver, subcutaneous tissue, and the brachial and phrenic arteries were similarly diseased, but to a less extent.

It was thought that the changes in the kidneys, intestines, and muscles were secondary to and a consequence of the vascular disturbances.

Meyer's case was quite analogous, and the absence of any disease of the central vessels in both cases is noteworthy, as excluding them from the series of cases which Charcot and Bouchard have described as miliary aneurisms. Other observations of multiple aneurisms have occasionally been reported, but in only three instances are they regarded as similar.

The patients were all young, males, accustomed to laborious muscular work, and it is suggested that a life of excesses may have been instrumental in producing the disease. Although Meyer's patient was syphilitic, there is no evidence that this disease existed in the other cases.

The study of the arteries was very suggestive as to the essential characteristic of the disease, and as to the origin of circumscribed aneurisms in general.

A common factor in the appearance of the aneurisms was the rupture of the vessel-wall. Other associated alterations, as thrombi, hyaline masses, new-formed tissue, even cellular infiltration of the adventitia and dilatation, were inconstant, and therefore to be regarded as secondary. The rupture of the wall affected either the entire thickness of the middle coat, or a portion of it, and it seemed quite likely that a complete rupture of the vessel-wall was the result of repeated partial ruptures. The various aneurisms had evidently taken place at different periods, as was manifested by the varying nature of the secondary changes associated with them. In this examination of numerous small aneurisms it was impossible to find any evidence of inflammatory changes in the media or in the adventitia; there was merely a rent in the middle coat. Although the nodules of the smallest arteries showed a cellular infiltration of the adventitia and surrounding connective tissue, such evidence of inflammation could not be regarded as primary, for it was often absent when aneurisms were present, and present when there was no laceration of the middle coat. Hence these miliary nodules also furnished as the single constant, therefore probable primary condition, a rupture with simultaneous dilatation. The histological examination of these aneurisms thus favored the view that a primary rupture of the media, independent of any inflammatory softening, is the cause of spontaneous aneurisms.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

DECEMBER 8, 1877. *Two Cases of Irregular Contraction of the Uterus in the Third Stage of Labor.*—DR. WELLINGTON reported the cases:—

CASE I. The first was that of a primipara, whom he found at midnight with a dilating os at the beginning of labor. At noon following the head was resting on the perineum. The pains had ceased, and there was no further progress. There was no impaction. Delivery was then easily effected by the forceps. The after-birth did not follow, and, after waiting twenty minutes, Dr. Wellington passed his hand into the uterus, and found at the upper part a constriction with a small opening, beyond which was an upper chamber completely filled by the entire placenta. It was adherent, and was got away with difficulty. There were no serious after-troubles.

CASE II. In the second case a breech presented, and was coming down well with good pains. After a while the pains began to slacken, and finally nearly ceased, and progress was arrested. Ether was then given, the hand was passed up, and the child delivered without difficulty. Another child was then found in the uterus. After waiting a while, the hand was passed up, the membranes were ruptured, and the second child was delivered. After a pause, the after-births not coming, the hand was again passed up; they were peeled off (they were united), and extracted apparently entire. The uterus seemed to be well contracted. Soon there was complaint of severe after-pains, and the woman became faint. Dr. Wellington found the uterus full of clots, and cleared them out completely, and in so doing discovered an irregular contraction, above which was a small cavity which contained a small piece of the placenta. This was got away, the uterus contracted well, and there was no more hæmorrhage. Rum, the only convenient stimulant at hand, with ergot was administered freely. The woman did well. To recapitulate: in the first case, the whole after-birth was included in an upper chamber, was got away with difficulty, and there was no hæmorrhage. In the second case, a little bit of the after-birth was inclosed, and was removed after severe flowing. In regard to these irregular contractions, Dr. Wellington said he believed they were not uncommon, but that he had never met with what is properly called hour-glass contraction with uniform division of the parts of the uterus. He was inclined to think that in a great proportion of cases of hæmorrhage after delivery a portion of the placenta may have been kept back.

In answer to a question, Dr. Wellington stated that ergot was given in both cases: in the former immediately after the birth of the child; in the latter, whether before or after the delivery of the placenta was not remembered.—DR. RICHARDSON said he thought one ran the risk of getting irregular contraction of the uterus by giving ergot before the uterus was empty, especially if the placenta had been already partially dislodged from its position on the uterine wall.—DR. LYMAN replied that it was certainly a very common practice to give ergot before the head is fairly delivered, and that the cases were very rare in which irregular contraction had been thus produced.—DR. RICHARDSON remarked that if we were sure the placenta were morbidly adherent it would not make so much difference when the ergot was administered; but that, under ordinary circumstances, it would be better to wait till the hand in the vagina found the placenta escaping through the os, or until the placenta had been expelled.—DR. INGALLS stated that it was his custom to give ergot as soon as the child was born, by way of precaution. He had never seen any evil results from this course. He also said that he thought, when the subject of ergot was discussed several years ago, that it was a tenet that the drug should be given while the child was coming into the world, so that misadventure by flooding should be avoided. Since adopting the plan of giving ergot at the birth of the child, he

had had no trouble with the placenta, nor special delay in its delivery. — DR. RICHARDSON related a case in which ergot was given when the placenta was morbidly adherent over a greater part of its surface. In consequence of the action of the ergot it was very difficult to get the hand into the uterus at all. There was, however, no irregular contraction.

Placenta Prævia. — DR. TUCK reported the case, which is reserved for publication. — DR. MINOT, in reference to the accident which happened in the case reported by Dr. Tuck, gave an account of the case of a patient who miscarried between the sixth and seventh month. The breech presented. In extracting, the body came away, leaving the head inside the womb, which closed over it. No attempt was made at immediate removal, and the case was left to the natural efforts. The next morning the head was found in the vagina, whence it was easily removed. There was no hæmorrhage. In answer to a question, Dr. Minot said the placental forceps might have been useful in this case. — DR. TUCK stated that he found no difficulty in getting the forceps on to the separated head, which was retained by the contraction of the womb and the extreme smallness of the vagina. In applying the instrument the head was steadied from the outside by an assistant. From the first to the third month of gestation in this case there was a constant flow of milk from the breasts, so that cloths were required to prevent the soiling of the dress.

A Complete Set of Obstetrical Implements in a Portable Case. — DR. RICHARDSON exhibited and described the case, which he had devised for his own use, and which had been made by Arnold, of London. It was a modification of Barnes's case; the centre, between the two opening sides, being occupied by a large case, so placed on a hinge as to be easily moved into a position at which its contents could be handled.

Fibroid Tumor removed from the Uterine Wall by Enucleation. — DR. MINOT read the case, and exhibited the specimen.

The patient, an unmarried woman, a domestic, entered the Massachusetts General Hospital April 12, 1877. Her health previously to the present disease had always been good. She began to menstruate at the age of fifteen, and had always been regular every four weeks, the flow lasting three days.

About January 1, 1875, she first noticed a small "lump" above the pubes. In the following October she had a stoppage of urine, which had to be relieved by the catheter; this recurred once or twice, and about the same time there was much frequency of micturition, especially at night; but these symptoms soon disappeared, and never returned. For a year before her entrance she noticed that at every third menstrual period she flowed very much, especially about January 1, 1877. A very abundant hæmorrhage also occurred about April 1st, just before her entrance into the hospital, when the patient estimated that she lost nearly a quart of blood daily for several days, with clots. She was pale, and a good deal exhausted. Pulse 93. There was much prominence in the hypogastrium, the enlargement extending up as far as the umbilicus; this was caused by a hard, lobulated tumor, which was found by vaginal and rectal exploration to almost completely fill the pelvis. The sound entered about eight inches, with a strong anterior convexity, between the tumor and the anterior wall of the uterus. The cervix was obliterated, and the os, very small, was found with difficulty. The tumor could be freely moved between the finger in the vagina and the hand over the abdomen. There was no great tenderness about the tumor.

The treatment was begun by administering thirty drops of fluid extract of ergot three times daily, the dose being gradually increased to one drachm. She continued the medicine with but little interruption throughout the treatment. It acted satisfactorily, causing no severe pain, but only a feeling of "bearing down." The effect on the tumor was very decided; the mass began to descend, and to press on the lower segment of the womb. May

18th, the catamenia came on, the bleeding being so profuse that it was deemed prudent to pack the vagina with sponges. May 22d, the lower part of the tumor, still inclosed in the uterus, was very near the external outlet. The os uteri was now nicked in several places, and a large incision was made through the capsule of the tumor. There was some difficulty in urinating, requiring the catheter. Considerable offensive discharge began, which continued throughout, treated by frequent injections of solution of carbolic acid. May 27th, another deep incision was made into the tumor. June 4th, the tumor was felt through the os uteri to be soft, shreddy, and disintegrating, and portions were extracted by forceps. June 9th, a pretty large amount was removed piecemeal. June 15th, the body of the tumor was seized with strong double hooks, turned out of its bed, and removed in two portions, each of the size of the fist. No acute symptoms followed. On the following morning the patient was comfortable, the os uteri was closed, and no tumor could be felt externally or internally. July 13th, the sound entered about three inches. The patient sat up all day July 4th, and on the 10th walked in the garden. There was a slight discharge for several days, which wholly ceased before she left the hospital, July 21st, on which day the record says, "She has not fully recovered her strength, but takes long walks daily; she eats heartily."

The patient called to report August 20th. She had nearly recovered her strength, and was otherwise quite well. She had menstruated once, naturally in all respects. No tumor could be found; there was slight tenderness over the ramus of the pubes, on the right side; the cervix was of normal size, and movable; the os was fissured and firmly closed. The sound was not used.

During the treatment the patient had twice a rigor, of a few minutes' duration, but no other acute symptom. The temperature remained normal, and the pulse moderate. There was never any severe pain. The most prominent symptom was prostration, for which, of course, nutritious diet and tonics were freely given. She objected so strongly to stimulants that they were used very sparingly. The intra-uterine injections of solution of carbolic acid, which were so important to the success of the treatment, were carefully administered by the house pupil, Mr. (now Dr.) Edward Chauncy Booth.

DR. LYMAN spoke of the fact to which Atlee called attention many years ago, that incision for enucleation generally arrests the hemorrhage. — DR. MINOT said that he had found this to be the case. — DR. WELLINGTON referred to a case of very large uterine fibroid which he had first seen twenty-five years ago, and which, after a ten years' absence of the patient in the State of Illinois, he found to have diminished to one half its former size. — DR. LYMAN remarked that these tumors would sometimes grow for a while, and then cease growing, and remain indefinitely long without any notable change. He gave a case illustrative of this course.

KLEIN AND NOBLE'S HISTOLOGY.¹

It would be difficult to speak too highly of the admirable plates representing blood and epithelium in the number before us. Many of the illustrations are colored, and all are clear and good. There are also several cuts in the text. The description of the figures and the remarks on the tissues are very satisfactory. We hope to be pardoned for quoting and expressing our concurrence in Klein's statement concerning the colored blood corpuscles of vertebrates: "In no instance have they when fresh a limiting membrane."

The second part more than confirms the favorable impressions which we received from the first number of this work. The four plates which it con-

¹ *Atlas of Histology*. By E. KLEIN, M. D., and E. SMITH NOBLE, M. R. C. S. Parts I. and II. Philadelphia: J. B. Lippincott & Co. London: Smith, Elder & Co. 1879.

tains are admirable, and the text very good. Endothelium and connective tissue corpuscles are discussed. It is no easy matter to give a satisfactory definition of endothelium. We have sometimes been tempted to say that is epithelium derived from the mesoblast; but embryology is by no means sufficiently understood to make such generalizations legitimate. There is at least a possibility (perhaps we should say a probability) that important structures are not in all vertebrates derived from the same layer of the blastoderm. While this uncertainty continues the definition of endothelium must be more or less arbitrary. Klein begins Chapter III. as follows: "Endothelium is understood to be the layer of flattened cells lining the free surface of any membrane, or cavity, or canal that is *not* a mucous membrane, or that is *not* the cavity or canal of a secreting gland respectively." This is certainly an ingenious way out of the difficulty. The word "flattened" before cells excludes those lining the central canal of the cord, which otherwise would have to be put among the exceptions to the rule.

The description of the various kinds of endothelial cells and of the methods of showing them is very satisfactory. Dr. Klein very properly introduces his views of germinating endothelium around stomata. It is to be regretted that there is a discrepancy between the text and the numbering of the figures in Plate VI. It is, however, merely a blemish in the execution of the work, and the errors are easily rectified.

The chapter on connective tissue corpuscles is equally good. A great variety of corpuscles are shown by several methods of preparation. Those of the cornea are finely shown with chloride of gold, while the "negative" of the picture, that is, the spaces inclosing the cells, are shown by nitrate of silver.

This work does not aspire to be an elaborate treatise on histology, but the authors are too modest (a rare fault) in calling it simply an atlas. The text is not merely a description of the figures. It shows the significance of the appearance with a clearness which is not often found, — which, indeed, is just what many more ambitious works lack, — and is therefore doubly grateful to the student.

T. D.

SMITH ON THE DISEASES OF INFANCY AND CHILDHOOD.¹

THIS excellent work is so well known that an extended notice at this time would be superfluous. The author has taken advantage of the demand for another new edition to revise in a most careful manner the entire book; and the numerous corrections and additions evince a determination on his part to keep fully abreast with the rapid progress that is being made in the knowledge and treatment of children's diseases. By the adoption of a somewhat closer type an increase in size of only thirty pages has been necessitated by the new subject matter introduced.

¹ *Diseases of Infancy and Childhood.* By T. LEWIS SMITH, M. D., Clinical Professor of Diseases of Children in Bellevue Hospital Medical College; Physician to the New York Foundling Asylum, and to the New York Infant Asylum; Consulting Physician to the Children's Class in the Bureau for the Relief of the Out-Door Poor; Physician to Charity Hospital, etc., etc. Fourth edition. Philadelphia: Henry C. Lea. 1879.

THE AMERICAN MEDICAL ASSOCIATION.

THE meeting at Atlanta appears to have been characterized by an unusual smoothness and harmony, which speaks well for the working of the machinery now for several years in operation. We notice, however, that a standing committee "for the more efficient organization of the association" was appointed, the objects in view being a more intimate relationship of the national association with the various state organizations. One suggestion made in the series of resolutions accompanying this appointment we think an admirable one, namely, "the substitution of a periodical medical journal for the present annual volume of transactions." By taking such a step the association would do an admirable work in demonstrating the great value of a journal with a national circulation, and there is little doubt if the motion proved to be ably carried out, that the popularity of the association would thereby be greatly increased. We hardly believe that the association has a firm enough hold at present upon the profession to call forth any hearty coöperation from the state societies as is suggested.

The motion of Dr. Davis, aimed at those who instruct students about to become homeopaths, although animated by a most worthy motive, seems to us to be an amendment which it would hardly be practicable to carry out.

The stand taken by the southern members, as reported by Dr. Logan, chairman of the committee of arrangements, on the quarantine question, is a significant one, and we doubt not that the attitude of the profession at Atlanta has had much influence in effecting the final passage of a quarantine bill.

There was some complaint at the meeting of the association of editors at the position taken by certain journals in refusing to exchange with the cheap periodicals, but this was hardly more than was to be expected.

The next meeting will be held in New York, and with the energetic Dr. Sayre to "boss" it, will draw, we doubt not, a large and enthusiastic crowd.

MCDOWELL'S MONUMENT.

ON the 14th of this month ceremonies inaugurating the monument to Ephraim McDowell, the creator of the operation for Ovariectomy, were held at Danville, Ky., the former home of McDowell. Many eminent medical men were present, Dr. Kimball, of Lowell, representing Massachusetts. An eloquent address was delivered by Prof. Samuel D. Gross, of Philadelphia, who is claimed by Kentucky as one of her most distinguished sons.

Professor Gross began his remarks by alluding to the widespread grief which was caused by McDowell's death on the 20th June, 1830. By none was his loss more deeply felt than by the poor to whom he had ever been a constant friend. It was here, while an unknown physician in a quiet village, that he performed the great exploit which no one had ever performed before him, — an exploit condemned by many wise, enlightened surgeons as an outrageous, if not murderous innovation, but now admitted as one of the established procedures in surgery. The honor of its origin has been ascribed to

L'Aumonier, 1776; to Houston of Dublin, 1771. But these claims are unsupported by facts. McDowell's operation, done in 1809, was the original ovariectomy. The history of the operation was then given by Dr. Gross. It remained in actual obscurity until 1827, by which time McDowell had repeated it several times. It was then that his defamers honestly recanted their scornful disbelief in the success of such an operation performed in the backwoods of America. In all McDowell did the operation thirteen times, with eight recoveries, four deaths, and one failure due to inability to complete the operation because of extensive adhesions of the tumor. Allusion was then made by Dr. Gross to the great benefits which humanity has derived from this procedure. Interesting statistics of the operation as performed in America and abroad were given, eloquent mention being made of Kimball, the two Atlees, Spencer Wells, Keith of Edinburgh, Dunlap of Ohio, Peaslee and Thomas of New York, and others. The decreasing mortality of the operation, improvements in diagnosis, the vast strides taken in general surgery, were touched upon in a forcible and interesting manner. The details of McDowell's life; his early struggles; his conscientiousness; his success; his lack of confidence in the efficacy of drugs and his thorough reliance upon surgery as the most certain branch of the healing art; anecdotes of his professional years; his large charity and generosity; his boldness as an operator, were most eloquently given. Dr. Gross claimed for McDowell a well-deserved immortality and the gratitude of the professional world. The latter half of his oration was devoted to prominent Kentucky men who have passed away and to other American pioneers in ovariectomy.

An interesting feature of the occasion was the presentation to Professor Gross by Dr. Cowling of the brass door knocker which once was attached to McDowell's door.

THE NEW YORK COUNTY MEDICAL SOCIETY.

THE county society has commenced the publication of the minutes of all its meetings since its organization in 1806, to be issued in monthly parts, under the editorship of Dr. A. E. M. Purdy, for many years secretary, and now vice-president, of the society, and to be distributed gratuitously to the members. The first part, comprising a record of the proceedings from the date of its foundation, July 1, 1806, to October 3, 1808, was published in April, and makes an attractive-looking pamphlet of sixty-four pages. There were originally one hundred and two members; but appended to the copy of the first by-laws enacted by the society there appear three hundred and twenty one names. Many of these are accompanied with a long list of titles and honors, sometimes in Latin and sometimes in English, and among the most noted of these are the following:—

Nicholas Romayne, Wright Post, Samuel L. Mitchell, David Hosack, Edward Delafield, Martyn Paine, and Valentine Mott.

There were quite a number of the members who had taken an active part in the war of the Revolution, and several who had been in the British service both before and during the latter. Thus one gentleman signs himself, "Native of Great Britain and Assistant Surgeon in His Britannic Majesty's Service in the year 1764 to 1769;" another (Dr. P. Turner), "Physician and Surgeon

General of the late Revolutionary War;" another, "Late Surgeon in the American Army;" another, "Late Surgeon in the Navy of his Majesty George III. the King of G. B.;" another, "Late assistant to the Health Officer N. Y. in 1797 and Surgeon American Artillery;" another, "Assistant Surgeon in his Britannic Majesty's General Hospitals in America from the year 1777 to 1783;" another, "Surgeon 5th Regiment N. Y.;" and there are many other instances of a similar character.

Among the members of foreign birth and education we find the following: Felix Parcalis (with many Latin titles affixed to his name); Gaetano De Angelis, of Naples; John W. Zeiss, "Late Surgeon in the Military Hospital of His Serene Highness the Prince of Hesse Cassel;" V. A. Servant Grangeae, "Montpeliensis universitatis Doctor nec non regius Sancti Domingui nosocomiorum medicus;" H. P. Servant Lafaye, "Surgeon in the French armies;" Chas. Guerin, "Physician of the 1st Class in the Hospitals of St. Domingo;" Otho Monroy, "Member of the Medical Society of Goettingen, Kingdom of Hanover, and lately army Physician in H. Britannic Majesty's German Legions;" Lewis Saynisch, "Licentiatu^s Medicinæ et Chirurgiæ Academia Wurzburg (Bavaria);" and Jean Lequievie, "Late Chief Physician of the Hospital de St. Jacques, Paris."

One gentleman on the list does not wish it to be forgotten that he was "formerly Physician to the Bellevue Hospital during the Yellow Fever of 1795 and '6," and another bases his claim to immortality on the fact that he was "born on Shelter Island, State of New York;" while a third is content to have his name go down to posterity with the simple title "Botanicus." Valentine Mott was not one of the original members, but after presenting his credentials and undergoing an examination by the censors of the society he was duly admitted at the first quarterly meeting, held October 6, 1806. The society was originated, it seems, for the purpose of "regulating the practice of Physic and Surgery" in the county, and it was necessary that every medical man residing therein should be invested by it with "the privileges of practicing physic and surgery, and the rights and immunities usually enjoyed by physicians and surgeons," when he had given evidence that he had regularly studied medicine for the term and in the manner prescribed by law, and had passed a successful examination by its censors. At the first anniversary meeting of the society it was resolved, on motion of Dr. Hosack, who had consulted Mr. Thomas Addis Emmet (afterwards retained as permanent counsel to the society) in regard to those who were comprehended in the state law as constituent members, "that all Physicians and Surgeons resident in the county of New York on the 1st Tuesday of July, 1806, and authorized by law, on or before that day, to practice their several professions, be declared *ipsa facto et de jure* original members of this corporation." The anniversary meeting was held on the first Monday in July, and the stated meetings on the first Monday in October, January, and April of every year; but beside these quarterly meetings, extraordinary ones might be called at any time, at the request of twenty members, in writing. One of the sections of the by-laws required that a fine of twenty-five cents should be paid for every absence from roll-call by a member. The first officers of the society were as follows: president, Nicholas

Romayne; vice-president, James Tillary; secretary, Edward Miller; and treasurer, Valentine Seaman. At one of the early meetings, in accordance with a series of resolutions passed, declaring that "a systematic arrangement and distribution of the pursuits and exertions of the members of the society would be conducive to the success of their labors, and to the consolidation and permanence of the benefits resulting therefrom," committees were appointed upon the following subjects: natural history, anatomy and surgery, midwifery, chemistry, botany, materia medica, institutes and practice of physic, library, museum, donations and communications, publication, and professional improvements.

For some months past the county society has had the minutes of its meetings printed and sent to every member within a week or two after they have been held.

THE TREATMENT OF HÆMORRHOIDS BY INJECTION.

PROF. EDMUND ANDREWS, of Chicago, has recently investigated this subject with much care and labor. This plan of treating piles has been practiced extensively of late by itinerant quacks throughout the West. Professor Andrews has corresponded with these people, as well as with regular surgeons. Carbolic acid is the medicament chiefly used, the strength of the injection varying among operators from pure acid to one part to twenty of some incipient, as olive oil, glycerine, etc. Ergot is sometimes added. Creosote and persulphate of iron are used by a few. Professor Andrews has procured the history of thirty-two hundred and ninety-five cases, operated on by all sorts of people. Nine are said to have died from the effects of the operation; of these only four can, he thinks, be justly charged to the treatment. There were five cases of dangerous hæmorrhage, five of less danger; ten had abscesses; twenty-three had sloughing, mostly of the piles only; eight had suspected embolism of the liver, one abscess of the liver; two had stricture of the rectum; two had severe inflammation; seventy-seven had violent pains, lasting often for days; six were dangerously sick in bed from two to six months; one had permanent impotence; in one an injection caused dangerous carbolic acid poisoning; there were seven relapses, and eight failures to cure. Of the cases of death, one had large abscess, fever, and pyæmia, and died on the fifth day; the patient previously had good health. One had apparent embolism of the liver, torpid bowels, jaundice, large inguinal and axillary glands, and death occurred ninety days after the operation. One patient was a man of eighty-four years; the injection was made into the prostate gland; death took place in three days. A fourth case had a similar accident and result as the last. One case of great suffering was where the plan was pursued of tearing open the hæmorrhoidal veins with a bunch of needles. Great bleeding took place, intense suffering, and the family doctor was consulted. He found the quack had plugged up the opening made by his needles with a small cork. The operation of injection of piles is not painless, — only one patient in four so saying. Andrews thinks the operation is not as safe as that of the ligature. Of three thousand cases, one in sixteen is known to have suffered some disaster, from severe pain

to death. He thinks large injections are more likely to produce embolism, abscess, and sloughing than small ones. There is no evidence that embolism of any other organ than the liver has occurred. Strong injections are open to the same objections as large ones, except that they are less likely to produce embolism. Pain depends on the situation of the pile; most pain occurs if it is near the verge of the anus.

The conclusions are that the operation is a proper one for selected cases. The best agent is carbolic acid and oil or glycerine, one part to ten, twenty, or thirty. If glycerine is used, morphine, chloral, or iodoform may be added for an anodyne. The proper quantity to inject at one time is two to four drops, and the operation may be repeated every four to ten days. The surface should be protected with a smearing of oil or vaseline, and the hypodermic needle should be kept in place some minutes after the injection to prevent return of the fluid upon the surface. A very sharp needle should be used, and the injection made slowly. The treatment should be used for internal piles only, and but one pile at a time should be attacked. The patient should be kept in bed eight to ten hours after each injection to avoid hæmorrhage. The rectum may be tamponed firmly above the pile to prevent hepatic embolism, the tampon being kept in place twenty-four hours after the operation, but this procedure is hardly necessary unless the stronger injections are employed. Finally, he considers the operation not as safe or eligible as the ligature, but when performed with care as good as any other operation except the ligature.

MEDICAL NOTES.

— We print this week a letter from Dr. Bigelow to the London *Lancet* upon the subject of litholapaxy. It relates especially to an effort of Sir Henry Thompson to appropriate the discovery of rapid lithotripsy. That such an attitude is wholly indefensible has been clearly shown by the editor of that journal.

— We are happy to learn that Dr. Knight has so far recovered from his protracted illness as to be able to resume practice.

PHILADELPHIA.

— Dr. John H. Brinton removed a large vesical calculus from a man fifty-six years of age at the clinic of the Jefferson Medical College Hospital a short time ago. The stone weighed four ounces and three drachms; it was phosphatic and soft, and had to be crushed previous to extraction. The patient died on the third day, apparently of exhaustion. At the same clinic he also operated by the lateral method upon a boy of nine years, and removed a stone weighing one ounce and fifteen grains, consisting of urates. The boy made a speedy recovery. A large stone was removed at the Women's Hospital by colpo-cystotomy; being too large to be removed entire, it was perforated by a drill operated by the dental engine, and afterwards crushed with forceps. The operation was successful, but the patient died.¹

¹ The case will be found reported in *The American Journal of the Medical Sciences* for January, 1889, page 143.

CHICAGO.

— The Chicago Medico-Historical Society is now, through the excellent editor of the Medical Register, Dr. Graham, gathering information for the fifth annual volume of that publication. This has become one of the solid institutions of the profession of the city and is fast becoming such among the profession of the State. Of course the chief feature of the publication is the list of regular physicians of the city. This is prepared with great care by the editor and committee of publication, and is passed upon by the society in open meeting, so that the list, as it is finally published, is as near a correct and fair one as it can well be made. The list modestly purports to contain the names of "physicians in Chicago who have been accredited to the Medico-Historical Society as in good and regular standing according to the Code of Ethics of the American Medical Association, and whose names are liable to excision from the list for violation of the Code." Doubtless each list has contained the names of men guilty of violation of the Code; and probably some names have been unjustly stricken off. The society has been often charged with acting unwisely and unjustly, but in hardly a single instance where the regularity of a practitioner has been passed upon has there been any ground for the charge that the society has acted otherwise than with care, moderation, and magnanimity. The policy has been to admit the names of all men against whom there is no flagrant charge of irregularity, rather than exclude one unjustly. That this policy has been adhered to is shown by the tide of professional criticism upon the annual list — the animadversions being almost solely against the society for admitting bad names, rather than the omission of good ones. The list has each year increased in the good estimation of the profession, and its high character will be maintained so long as the society continues to act with the discretion that has characterized it in the past. The list of the State at large is made up with the coöperation of the State Medical Society, a committee being appointed each year to act in conjunction with the regular committee of the Medico-Historical Society. The State list cannot be as full and accurate as the city list, but each year it is being made more complete, and already the work has shown the resolve of the state society to coöperate with our local organization to be one of the most sensible and successful steps ever taken. At the recent annual meeting of the society the president, Dr. S. Wickersham, was reelected. The officer of editor is a permanent one, and has been filled by the present incumbent three years. There are about fifty members.

ST. LOUIS.

— A most excellent article on the low death rate of St. Louis, by Dr. A. J. Steel, appears in the *St. Louis Courier of Medicine* for May.

— There is some fear that yellow fever may break out among us during the coming summer, for two reasons. First. On account of the great number of negroes from the yellow fever districts, who have stopped here, with their clothing, bedding, and furniture, on their way to Kansas. Second. Because some few cases of it originated here last summer. These patients, however, contracted it from those bringing it from the South. This expectation at first sight seems justifiable, for we accept the theory that the disease is communi-

cated by fomites: these are here in abundance, — blankets, etc., of the refugees, — and we know by sad experience that the yellow fever germ may act with fatal malignancy here during our warm months, as last summer Dr. H. C. Davis, at that time in charge of our quarantine hospital, and three of those employed about the place died of undoubted yellow fever, contracted while at the institution. Thus it seems certain that the germs of the disease are here, and that the coming season may furnish an atmosphere in which they may become active. We have been trusting in the severity of our winter to insure us against what has very suggestively been called the “Jack of spades;” but the case of the Plymouth, cited in the *JOURNAL* for April 10th, has shaken our confidence in the efficacy of cold. Among the profession there is no apprehension, yet the health department has taken precautions in order to avert the danger, and to be prepared in case an emergency should arise. The buildings at the quarantine hospital, which were used last year for the treatment of yellow fever, have been burned, and ones of frame are to be erected. Our health officer, Dr. George Homan, represented the St. Louis Board of Health at the Sanitary Council of the Mississippi Valley, and in a few days will make a report of their transactions, with suggestions upon the subjects of quarantine etc., for the purpose of rendering our sanitary measures as perfect as possible.

— A medical fraternity has recently come into existence. It is to be called the Beaumont Medical Club, after the distinguished physiologist of that name who made St. Louis his home. Its membership, of course, is small as yet: but those who compose it are active, enterprising, educated men, calculated to make the association useful and respected. The object of the club is to establish annual lectureships, by which the members shall be kept informed upon the most recent thought of the day. Its officers are Dr. G. F. Gill, president; Dr. J. N. Love, vice-president; Dr. T. B. Taylor, secretary; and Dr. G. Homan, treasurer.

CORRESPONDENCE.

LITHOLAPAXY. — LETTER FROM DR. BIGELOW TO THE LONDON LANCET.

TO THE EDITOR OF THE LANCET:—The *Lancet* of February 1st contains a paper by Sir Henry Thompson, entitled A Lecture on Lithotripsy at one or more Sitzings. In another communication, February 15th, he promises to give his views more completely “in the fifth edition” of his Clinical Lectures, “now going through the press.” The publication of this volume will be looked for with the more interest because the Lecture on Lithotripsy fails to give a clear exposition of the author’s existing views. It mixes new and old ideas, its tendency being to obliterate rather than define the line between what has been done by lithotripsy hitherto and what can be accomplished now; leaving the reader uncertain how far Sir Henry discriminates between the new and old methods.

The new operation enlarges the range of lithotripsy, and encroaches upon that which has hitherto been regarded as belonging exclusively to lithotomy. This is all I claim for it. Cases can be relieved by litholapaxy which would not have been treated by the old lithotripsy: as, for instance, one case, where eighteen hundred and two grains of soft stone were removed at three sittings,

one of nearly four hours' duration, the patient travelling home four days afterwards. Such a result, till now wholly unprecedented, would have been before regarded as bordering on the impossible. Experience alone can decide the limits of the new operation.¹ I am surprised that Sir Henry should attribute to me a disposition "to make the rule absolute to remove at one sitting an entire stone, no matter how large it may be, or what may be the condition of the patient." He adds: "Invariable conformity to such a rule, I do not hesitate at the outset to say, will lead to results which, though often successful, will not seldom be disastrous." This is obvious.

In attempting to identify the old operation and the new, Sir Henry relies mainly upon his having used Clover's form of Crampton's instrument, with which Sir Philip, before 1846, drew "upwards of two drachms of pulverized calculus at once from the bladder."² He dwells much on what he calls "that useful instrument, the aspirator of Clover." It is figured in his former works with half a dozen differently curved catheters attached to it. He now figures it (see *Lancet*) with "a slight modification," as he says, based upon what he calls a "hint" from my "aspirator." It is quite extraordinary that Sir Henry should claim such efficiency for Clover's apparatus. Except in cases where the prostate is so enlarged that the bladder retains even sand, his is the only voice, so far as I know, that has spoken in its favor.³

¹ So early as 1846 Sir Philip Crampton said: "It appears, then, that cystotomy and lithotripsy are not to be considered as rivals, and that the question as to which of the operations should be the rule and which the exception should never be brought into discussion; each operation has its special province, the boundaries of which (if, indeed, they admit of being fixed at all) can be determined only by a comparison of a vast collection of facts, carefully noted, and, above all, faithfully reported and properly authenticated." (*Dublin Quarterly Journal of Medical Science*, vol. i., 1846, page 25.)

² Op. cit., page 22.

³ For the information of those who have not seen my paper, I here cite the latest authorities on this point:—

(A.) "We may here say, without fear of being accused of exaggeration, that evacuating injections practiced after sittings of lithotripsy have no apology for their use. *The whole surgical arsenal invented for their performance is absolutely useless. . . . It should be well understood that the best of evacuating catheters is worthless. . . .* If a fragment is already too large to pass the urethra easily, it will pass the calibre of a catheter much less easily, no matter how forcible the suction." (Article *Lithotritie*, by Demarquay et Cousin, in the *Nouveau Dictionnaire de Médecine et de Chirurgie pratique*, Paris, 1875, pages 693, 694.)

(B.) "Having used it [Clover's apparatus] very frequently, I would add that it is necessary to use all such apparatus with extreme gentleness, and *I prefer to do without it*, if possible." (Sir Henry Thompson, *Practical Lithotripsy and Lithotomy*, 1871, page 215.)

(C.) "*All these evacuating catheters are little employed. They require frequent and long manœuvres, which are not exempt from dangers; besides, they give passage, as a rule, only to dust, or to small fragments of stone, which would have escaped of themselves without inconvenience to the urethra.*" (Article *Lithotritie*, by M. Voillemier, *Dictionnaire encyclopédique des Sciences médicales*, 1869, page 733.)

(D.) "In short, the 'evacuating apparatus' and the evacuating method hitherto employed do not evacuate. This fact is beyond question." (*Litholapaxy, etc.*, by Henry J. Bigelow. London: J. and A. Churchill. 1878. Pages 6, 7.)

Sir Henry Thompson also testifies to the inefficiency of Clover's instrument in admitting that when, in the old lithotripsy, he wanted to evacuate the fragments as rapidly as possible he employed several sittings. "It is desirable," he says (*Clinical Lecture, Lancet*, January 8, 1876, page 38), "to treat any cystitis that may occur during the course of the sittings, especially if it is severe, by freely crushing the stone without delay. . . . Under thes

Clover's instrument is a very good bladder-washer. But as an evacuator of anything but sand and minute fragments that can also pass the urethra without it, it is unequivocally worthless. It cannot be otherwise. Its size, with its collar, is only No. 21 French calibre, through which nothing of importance can escape from the bladder. In fact, to adapt it to the new system, Sir Henry has been compelled to enlarge its calibre from 21 to 26. Again, the bulb of Clover is so weak that in a vertical position it cannot expand to its own full dimensions; much less can it aspirate effectively. For this slender bag Sir Henry has now substituted a bulb, "stiff," as he describes it, like mine. The short curve which I had selected from the arsenal of old catheters and sounds for the end of my curved tube he now discovers to be the "more generally useful form."¹ He has also adopted my terminal trap below the bulb. With these modifications, he gives what he entitles "an admirable illustration of the existing method." This flattering adoption of the essential features of my plan, which Sir Henry calls "taking a hint," is rather like taking the apparatus. If not, let Sir Henry endeavor to evacuate a stone of moderate size with "Clover's original instrument" even as now "slightly modified" by him, omitting only the "stiff" bulb and enlarged tube.²

Although my pump acts perfectly, the operator will doubtless modify it a little to suit himself, adopting the necessary conditions of an adequate exhaust of some sort, an adequate evacuating tube, and an efficient trap. I find also that an elastic tube interposed between the bulb and the bladder, to avoid the jar of pumping, is desirable.

But what I insist upon, as characterizing the new lithotritry, is:—

(1.) A practical recognition of the tolerance of the bladder, which is far less sensitive to instruments than to fragments, with the obvious corollary that, when the operator crushes a stone, it is better to remove the fragments by protracting the operation than to leave them, as has been hitherto the usual practice of distinguished operators, including Sir Henry Thompson; and

circumstances," he continues, "I place the patient under the influence of ether, crush freely all the large and sharp pieces, and wash out the débris with Mr. Clover's aspirator."

But as Clover's instrument evacuates inefficiently, Sir Henry is compelled to add: "If some large pieces still remain after the fresh crushing, the former symptoms of cystitis reappear in two or three days, and may be again relieved by another sitting, this time altogether or nearly so, as a succeeding crushing will, no doubt, dispose of the principal part of the stone, and leave at all events no considerable fragments."

¹ Hitherto Sir Henry has designated as the most useful form a squarely cut extremity. (The Diseases of the Prostate, etc., by Sir Henry Thompson, etc., etc. Fourth edition. Henry C. Lea: Philadelphia. 1873. Page 337.) "In most cases," he says, "the best kind is that which is cut transversely at the distal end." Such an extremity is really the worst, because it is at once closed by the bladder.

² Sir Henry does not seem to appreciate the full use of a large tube. This is shown by his figure of the "modified" instrument (see *Lancet*, February 1st), where, although the calibre of the evacuating tube is 26, its hole for the admission of fragments is but little more than half its diameter. Where lies the utility of so large a tube, if only small fragments can get into it? This inadequate hole is a relic of the Clover instrument.

As regards the size of the tube, the operator can fairly take advantage of the full size of the urethra. The larger the tube, the larger will be the fragments released. I have employed, without any objectionable result, a 30 French calibre, often 31; and I prefer a straight tube. Although these larger sizes are not essential to the operation, they admit many fragments that would otherwise have to be crushed.

(2.) The use of a tube large enough to afford an easy passage from the bladder, not (as with Clover's instrument) for sand, which does not need it, but for detritus, which, owing to its size or quantity, would not pass the urethra without it; this being an application of Otis's discovery of the previously unrecognized capacity of the urethra, of which the meatus is the narrowest part.

This is not in accordance with the former teaching of lithotritists. At the late lithotrity meeting of the Medico-Chirurgical Society there was no question about the traditional few minutes,¹ as the limit of time beyond which it is not usually safe for the lithotritist to try the patience of an average bladder. The error is a natural one. Surgeons have hitherto attributed to instruments of polished metal the damage really due to the roughness of fragments. With Sir Henry Thompson, they believed that "the mere sojourn of the instrument in the bladder is a source of irritation precisely corresponding to the time, within certain limits, it continues there. Anything, therefore, that will diminish the time of the operation and the amount of movement and concussion, will necessarily give a greater prospect of success."² This mistake prevailed for half a century, because the real cause of the injury could not be ascertained. There was absolutely no way to extract fragments large or abundant enough to make trouble, and to show what would be the behavior of the bladder when thus relieved. The new instrument first accomplished the evacuation of bulky debris, and by removing this source of inflammation disclosed the comparative harmlessness of the lithotrite and the pump. The discovery of the tolerance of the bladder could have been made in no other way. What Sir Henry Thompson would call a little modification of method involved an important difference in result, making it easy to accomplish what was before impracticable, — a trite occurrence in the history of inventions.

There can be no doubt about Sir Henry Thompson's teaching. So lately as 1876 he writes: "You heard me say in the theatre the other day . . . that you should not encourage the early passing of the fragments. They rest at the bottom of the bladder. I usually keep the patient in bed, and pretty much on his back, for thirty-six hours or so afterwards; he should, at all events, for that period of time pass urine in that position, so that the sharp, angular fragments are left at the bottom of the bladder, and are not forced into the urethra."³ With unparalleled opportunities for observation, Sir Henry seems to have been well satisfied with the old lithotrity and its instruments. In the lecture to which he refers for an exposition of his latest views, he says: "I do not mean to say that any striking novelties in the instruments, or in the system of operating, have recently been achieved. The mechanical procedure has probably long been too nearly perfect to permit us to expect results of that kind."⁴ When this conservative view was again expressed at the lithotrity meeting of the Medico-Chirurgical Society in 1878,⁵ it elicited nothing from

¹ "A sojourn, say of two minutes, in the bladder, which I will allow you, although you know I do not occupy so much time myself." (*Clinical Lectures on Diseases of the Urinary Organs, etc.*, by Sir Henry Thompson, etc., etc. Fourth edition. London. J. and A. Churchill. 1876. Page 188.)

² *Op. cit.*, page 172.

³ *Op. cit.*, page 189. See also page 190.

⁴ Clinical Lecture, *Lancet*, January 8, 1876.

⁵ The *Lancet*, March 16, 1878, page 385.

Sir Henry concerning the tolerance of the bladder to instruments, the advantage of removing all fragments, or any other essential feature of the new operation.

I may here allude to a small matter. Sir Henry insists upon the importance of making the movements of the bulb keep time with the respiration of the patient. I think this will be found both unnecessary and impracticable. The first part of any long aspiration, whether it is or is not synchronous with the breathing, suffices to clog the orifice of the tube with débris; the rest of the aspiration is then useless. Nor does a "stiff" bulb need to be aided by the diaphragm of the patient. Nor need danger be apprehended from any expulsive effort to which the bladder is accustomed, like respiration, cough, or even vomiting. In fact, this last is not unusual with an anæsthetic: I let the water off while it continues.

Although a long stroke is occasionally useful, I commonly pump at the rate of about twice in three seconds, moving only about two ounces of water back and forth. The main difficulty is to find for the extremity of the tube the best place for gathering fragments, and to prevent its obstruction, whether by fragments or by the bladder. This somewhat nice adjustment is experimental, and, I think, is easiest when the left hand, holding the evacuating tube, rests on the pubes. The manipulation is provided for in my instrument by the intervention, between the evacuating tube and the bulb, of an elastic tube eight inches long. If the operator prefers, it may be shorter; my first one was only two inches long. The facility and delicacy of the manipulation, it is needless to say, are greatly impaired if the bulb be rigidly attached to the evacuating tube, as in Clover's apparatus and Sir Henry Thompson's figure, — especially if, as there, it is placed above the tube.

In my present method of evacuating the débris, the bulb full of water is coupled with the evacuating tube introduced into the empty bladder; and when the pump is in action water is added to distend the bladder, if its walls prove to be slack enough to fall into the eye of the tube and obstruct it. The earlier cases naturally occupied more time than is now necessary; but I still find, as at first, that the most time is spent in searching for and removing the last fragment, and in incidental delays, — not in evacuating the mass of débris, which is drawn out with surprising rapidity. With ether, rapid surgery has become less essential; and lithotrity is now, perhaps, less than any other surgical operation, to be performed against time. I doubt whether the hurried operation mentioned by Sir Henry Thompson would bear frequent repetition even by himself. There would seem to be need rather of deliberation than of haste. A remaining fragment may be easily overlooked, and in less skilled hands haste might be mischievous. Removing a stone of one hundred and twenty grains, with two lithotrites and an assistant to clear them, is mainly the operation of Fergusson, who relied for evacuation on repeated withdrawals of the loaded instrument.

Lithotripsy is now no novelty in America; and its success here will, I think, recommend it elsewhere. Allow me to add a few recent examples.

An operation which I performed January 26th, in the case of a medical gentleman, aged sixty-seven, lasted fifty minutes, and consisted of two crush-

ings, occupying fifteen minutes; three evacuations of fragments, nine minutes; changes and other delay, twenty-six minutes. Two hundred and sixty grains of phosphatic stone were thus removed. The patient had no trouble from the operation, and on the thirteenth day went home to the country, well. There were no fragments left in the bladder.

In another case, February 10th, that of a man aged fifty years, one diameter of the stone measured $1\frac{3}{8}$ inches. The operation lasted one hour and twenty-one minutes. The crushings occupied twenty minutes, the evacuation of fragments thirty, while the changes, etc., were recorded at thirty-one minutes. Three hundred and two grains of hard oxalic calculus were crushed and drawn out, — with some delay in the operation, due to fragments lodged behind a high prostate. I was unable to break the stone with Charrière's, or rather Collin's, instrument. The patient had no unfavorable symptoms, hardly a trace of blood, and no fragments were left.

This case, which involves, so far as I know, the largest hard stone yet evacuated at one sitting, is an example of what can be done by the new process. In evacuating such stones, it need only be said that the smaller the tube the more minutely must the fragments be broken, and the greater will be the liability to obstruction. Small stones, common in these later days of lithotripsy, especially soft ones, are not infrequently crushed at one sitting, by any lithotrite, without ether, and, if reduced to sand, may really need no tube to evacuate them.

The following case is as good a test of the new operation as I could wish:

The patient, aged thirty-three, entered the hospital October 31st, about four months and a half ago. His condition was so bad that it was thought unadvisable to attempt any operation, even lithotomy. The urine was ammoniacal and fetid, always containing a large quantity of blood; also pus and mucus to the amount, sometimes of nearly one half by measurement. Micturition was frequent, occurring at intervals of from ten minutes to half an hour, day and night, during much of this time. The straining was excessive, ineffectual, and productive of great suffering. Three unsuccessful attempts having been made on previous days, a sound was first introduced into the bladder, under ether, November 10th. The next day the temperature rose to 103° , and remained thereabouts till the fourth day, when another complication presented itself. The left knee became suddenly inflamed and swollen. It has remained so ever since. During the next two months the temperature ranged from 100° to 102° daily, afterwards slowly receding, though the other symptoms did not abate.

I saw the case, for the first time, March 7th. With so diseased and irritable a bladder, it was evident that litholapaxy could be considered only as an experiment. It was a last resort, being perhaps better than lithotomy. Should it succeed, it would testify strongly in favor of the new method; should it fail, it could hardly be counted against it.

On the 9th of March I operated. In the neighborhood of the triangular ligament an obstruction prevented the passage of sounds larger than a No. 15 French calibre. After snipping the meatus, this obstruction was divulsed by Voilemier's instrument, and it then admitted a full-sized lithotrite, and a straight tube 29 French, for which, later in the operation, 30 was substituted

Two hundred and forty grains of stone were now slowly and carefully removed in sixty-eight minutes. An abundance of flocculent and fibrinous material concealed the fragments when lying in a basin, and testified to the inflammation.

At four P. M., four hours after the operation, the temperature had fallen from 99° to 96°. In eight hours more, at midnight, it had risen to 103° with a pulse of 130, where it remained through the second day, the tongue being red, smooth, and dry. A general pain in the region of the bladder and urethra required opiates. Yet on the third day the tongue became moist, with a light coat: the temperature had fallen to 99°, and the pulse to 84. This improvement still continues. The patient has had no such comfort for many months. During the first week after the operation, he passed his water six times in twenty-four hours almost without pain, and there has been no tenderness over the bladder. The urine contains very little sediment, and, apart from the knee, which remains as it was, the patient is rapidly convalescing.

A calculus can of course be crushed with any lithotrite. I have only to add a few words regarding the new one. Sir Henry does not seem so heartily satisfied with this instrument of mine as I could wish, nor, in fact, with anything connected with the new operation, unless possibly its results. This lithotrite, he says, is "surely some resuscitated relic of the early history of lithotrity! . . . reminding me very forcibly of the terrible engines used by Heurteloup."¹ The present tendency of London lithotrites is to small size, because it has been believed that the smaller the instrument the less the danger. With long operations, large stones, and the general use of ether, they will again be larger. With size we gain power. There is no more reason for employing small lithotrites to empty, under ether, an average bladder than small catheters to draw the water. In fact, the surgeon who becomes accustomed to the efficient action of a large lithotrite does not willingly relinquish it; a little more care is necessary in introducing it, but, if non-impacting, it need not be withdrawn, loaded with sharp fragments, through the neck of the bladder, at short intervals, to be cleaned by an assistant.

My new lithotrite proves to be very efficient, and I am recently indebted to London makers (Weiss and Son) for an instrument that works perfectly. It is of a good size for general use; a smaller one, if preferred, may be used in special cases. It can be made of any size. This instrument is non-impacting, and keeps clean in the bladder for an indefinite time. Its rounded tip protects the bladder in a protracted operation, — as it also does the prostate during introduction. For the old wheel, which hurts the hand in long crushing, the ball is a welcome substitute. And unless the human hand undergoes some modification of what are now its easiest movements, the system of a *right-hand lock*, here first employed, must, as I believe, whatever be the size of the lithotrite, supersede in time any previous method of locking.

HENRY J. BIGELOW.

Boston, March 25, 1879.

¹ Of Heurteloup's operation Crompton says: "Nothing could exceed the dexterity and skill, unless it be the gentleness, with which it was performed." Op. cit., page 17.

REPORTED MORTALITY FOR THE WEEK ENDING MAY 17, 1879.

Cities.	Popula- tion estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from				
				The Prin- cipal "Zymo- tic" Diseases.	Pneumo- nia.	Scarlet Fe- ver.	Diphtheria and Croup.	Diarrheal Diseases.
New York.....	1,085,000	499	23.98	19.24	6.01	8.42	2.61	1.80
Philadelphia.....	—	264	—	9.47	5.30	1.89	1.89	1.14
Brooklyn.....	564,400	191	17.65	18.32	10.47	4.71	4.19	1.57
Chicago.....	—	138	—	23.19	8.70	7.25	9.42	—
St. Louis.....	—	100	—	16.00	4.00	1.00	3.00	2.00
Baltimore.....	365,000	115	16.42	21.74	5.22	9.57	8.70	—
Boston.....	360,000	121	17.52	13.22	14.90	2.48	1.65	4.13
Cincinnati.....	280,000	90	16.76	14.44	6.67	8.89	—	2.22
District of Columbia.....	160,000	70	22.81	12.85	8.57	5.71	1.43	1.43
Cleveland.....	—	45	—	31.11	8.89	6.67	8.89	2.22
Pittsburgh.....	—	32	—	15.63	3.13	—	—	6.25
Milwaukee.....	—	33	—	42.42	6.06	3.03	30.30	3.03
Providence.....	101,000	40	20.65	10.00	15.00	5.00	5.00	—
New Haven.....	60,000	21	18.25	4.76	4.76	—	—	—
Charleston.....	57,000	24	21.95	8.33	4.17	—	—	8.33
Nashville.....	27,000	14	27.03	7.14	14.28	—	—	7.14
Lowell.....	53,300	16	15.65	—	12.50	—	—	—
Worcester.....	52,500	13	12.91	7.63	23.08	—	—	—
Cambridge.....	51,400	15	15.21	13.33	—	—	13.33	—
Fall River.....	48,500	—	—	—	—	—	—	—
Lawrence.....	38,200	13	17.75	15.33	7.69	—	7.69	—
Lynn.....	34,000	14	21.48	14.23	21.43	—	7.14	—
Springfield.....	31,500	7	11.59	42.86	—	14.28	—	—
New Bedford.....	27,000	14	27.03	14.28	—	—	—	—
Salem.....	26,400	13	25.68	23.03	15.39	—	—	—
Somerville.....	23,350	11	24.56	—	—	—	—	—
Chelsea.....	20,800	8	20.06	—	—	—	—	—
Taunton.....	20,200	4	10.32	—	25.00	—	—	—
Holyoke.....	18,200	8	22.92	25.00	—	—	25.00	—
Gloucester.....	17,100	6	18.29	16.67	16.67	—	—	16.67
Newton.....	17,100	—	—	—	—	—	—	—
Haverhill.....	15,300	6	20.45	16.67	33.33	—	—	16.67
Newburyport.....	13,500	5	19.31	—	—	—	—	—
Fitchburg.....	12,500	3	12.51	33.33	—	—	33.33	—

One thousand nine hundred and forty deaths were reported: 324 from the principal "zymotic" diseases, 317 from consumption, 169 from pneumonia, 100 from scarlet fever, 77 from diphtheria and croup, 54 from bronchitis, 34 from diarrheal diseases, 29 from whooping-cough, 20 from typhoid fever, 20 from erysipelas, 19 from measles, 13 from cerebro-spinal meningitis, 10 from malarial fevers, two from intermittent fever, one each from remittent, congestive, and typho-malarial fever, none from small-pox: indicating a decreased mortality from all reported causes except bronchitis, cerebro-spinal meningitis, measles, scarlet fever, and pulmonary consumption, the increase in the three last mentioned being considerable. The progressive decrease in pneumonia of the last several weeks continues. From *bronchitis*, 30 deaths were reported in New York, six in Philadelphia, four in Brooklyn, two in St. Louis, District of Columbia, Cleveland, and Cambridge, one in Boston, Pittsburgh, Nashville, Worcester, Salem, and Somerville. From *whooping-cough*, 17 in New York, six in Brooklyn, one in Chicago, St. Louis, Boston, Cincinnati, Pittsburgh, and Springfield. From *typhoid fever*, six in Philadelphia, three in New York, two in Baltimore, Boston, and New Bedford, one in Chicago, District of Columbia, Milwaukee, New Haven, and Salem. From *erysipelas*, four in New York and Brooklyn, two in Chicago, St. Louis, and Boston, one in Philadelphia, Cincinnati, District of Columbia, Cleveland, Salem, and Springfield. From *measles*, five in Cleveland, four in New York, three in Brooklyn, two in Baltimore and Pittsburgh, one in St. Louis, Boston, and District of Columbia. From *malarial, intermittent, remittent, congestive, and typho-malarial fevers*, six in St. Louis, four in New York, two in Brooklyn and Chicago, one in District of Columbia. In seventeen of the nineteen cities of Massachusetts, the mortality from diphtheria, croup, and whooping-cough was less than for the previous week; from the other "zymotic" diseases, and from consumption and pneumonia, greater, — from the latter but slightly.

The weather was generally reported as being unseasonably warm, especially during the

first half of the week, with slight showers and rain, the meteorological record in Boston (latitude 42° 21', longitude 71° 4') for the week being as follows:—

Date.	Barom-eter.	Thermom-eter.				Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in Inches.	
May 11	30.325	63	71	44	56	37	48	47	O	E	S	6	10	9	F	C	C	—	—	
" 12	30.152	65	72	44	58	41	59	63	SW	SW	SW	8	16	13	C	C	C	—	—	
" 13	30.056	71	74	61	78	50	79	69	SW	SW	SW	14	10	7	H	H	F	—	—	
" 14	29.982	70	80	60	82	38	60	63	SW	S	SW	12	18	14	H	H	C	—	—	
" 15	29.993	67	73	47	82	48	79	72	SW	SW	S	12	20	5	O	F	F	1.33	.05	
" 16	29.944	62	68	56	100	100	84	95	E	SE	SW	2	8	9	G	R	C	6.34	.17	
" 17	30.057	67	80	62	97	66	79	81	SW	SE	SW	5	3	8	O	F	F	—	—	
Week.	30.071	65							SW			1774						7.67	.22	

O, cloudy; C, clear; F, fair; H, fog; H, haze; R, rain; T, threatening.

For the week ending April 26th, in 149 German cities and towns, with an estimated population of 7,517,640, the death-rate was 27.0, a decrease of 1.2 from the previous week; typhoid fever and diarrhoeal diseases showing an increased mortality, the other "zymotics" and pulmonary consumption less. Three thousand nine hundred and five deaths were reported: 609 from consumption, 502 from acute diseases of the respiratory organs, 176 from diarrhoeal diseases, 130 from diphtheria and croup, 57 from whooping-cough, 55 from typhoid fever, 45 from scarlet fever, 33 from puerperal fever, 31 from measles, six from typhus fever, one from small-pox (in Dantzie). The death-rates ranged from 19.8 in Kiel to 46.1 in Brunswick.

For the week ending May 3d, in the 20 English cities having an estimated population of 7,383,999, the death-rate was 23.4, a decrease of 1.5 from the previous week, showing a decline in all the prominent causes of death except from diarrhoea, fever, and small-pox, which remained almost unchanged, and from measles and scarlet fever, which were somewhat more fatal. Three thousand three hundred and fourteen deaths were reported: 429 from diseases of the respiratory organs, 132 from whooping-cough, 88 from measles, 87 from scarlet fever, 43 from diarrhoea, 39 from fever, 24 from diphtheria, 10 from small-pox (in London). The death-rates ranged from 17.4 in Bristol to 28.4 in Manchester. Small-pox was less fatal in Dublin (six deaths). Edinburgh and Glasgow showed very low death-rates (20 and 21).

Cases of fever are becoming fewer in St. Petersburg, while the mortality from typhus has decidedly increased in Astrachan and Adrianople; no new cases of the plague have been reported. The sanitary control of the Mecca pilgrims is now so rigid that Dr. Rezak reports an absence of cholera among them, although remittent fever, pneumonia, and diarrhoeal diseases have been not uncommon; he thinks that the cases reported as cholera were not such.

ERRATUM. — Page 684, instead of *Dr.* read *Mr.* Angell.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — The next meeting will be held June 2d, at the hall of the Medical Library Association. Reader, Dr. Bixby. Subject, A Case of Shot Wound of the Bladder, with Recovery. Shot Wounds of the Bladder in the Late War of the Rebellion. F. C. SHATTUCK, Secretary.

SUFFOLK DISTRICT MEDICAL SOCIETY. — A regular meeting will be held at the hall, 19 Boylston Place, on Saturday evening, May 31st, at seven and a half o'clock. The following papers will be read: Dr. C. P. Putnam, Cases of Hip Disease under Treatment. Dr. Aaron Young, Analogy of Rabies and Venom Poisoning. Dr. J. Collins Warren, A New Point in the Anatomy of the Skin.

Supper at nine o'clock.

THE GYNÆCOLOGICAL SOCIETY OF BOSTON.—The next regular meeting of the society will be held at Medical Library Rooms, 19 Boylston Place, on the first Thursday of June, at two o'clock P. M. The following papers are promised: Pelvic Abscess, by A. P. Weeks, M. D. Puerperal Metritis, by A. L. Norris, M. D. The profession are invited.

HENRY M. FIELD, M. D., *Secretary*.

MIDDLESEX EAST DISTRICT MEDICAL SOCIETY.—At the annual meeting, held at Woburn, May 14, 1879, the following officers were elected for the ensuing year: President, Francis F. Brown. Vice-President, Daniel W. Wight. Secretary, J. Richmond Barss. Treasurer and Librarian, John O. Dow. Auditor, George E. Putney. Reporter, Daniel W. Wight. Councilors, John M. Harlow, Frederick Winsor, W. S. Brown. Censors, A. H. Cowdrey, W. F. Stevens, G. E. Putney, F. W. Graves, G. P. Bartlett. Commissioner on Trials, A. H. Cowdrey. Councilor for Nominating Committee, J. H. Harlow.

J. RICHMOND BARSS, *Secretary*.

BOOKS AND PAMPHLETS RECEIVED.—A Clinical Treatise on Diseases of the Liver. By Dr. Fried. Theod. Frerichs. In three volumes. Vol. III. Translated by Charles Murchison, M. D., F. R. C. P. New York: William Wood & Co. 1879.

Ophthalmic Out-Patient Practice. By Charles Higgins, F. R. C. S. Second Edition. Philadelphia: Lindsay and Blakiston. 1879.

The Laws of Therapeutics; or, The Science and Art of Medicine. By Joseph Kidd, M. D. Philadelphia: Lindsay and Blakiston. 1879.

Minutes of the Medical Society of the County of New York, 1806–1878. A. E. M. Purdy, M. D. April. Part I. New York. 1879.

Supplementary Rectal Alimentation, and especially by Defibrinated Blood, as applicable to a large Range of Cases in which Nutritive Enemata have not heretofore been Employed. By Andrew H. Smith, M. D. (Archives of Medicine.) 1879.

The Therapeutical Society of New York. (New York Medical Journal, April, 1879.)

Demonstrations of Anatomy: Being a Guide to the Knowledge of the Human Body by Dissection. By George Tiner Ellis, Emeritus Professor of Anatomy in University College, London. From the Eighth and Revised English Edition. Philadelphia: Henry C. Lea. 1879.

Atlas of Histology. Part II. By E. Klein, M. D., F. R. S., and E. Noble Smith, L. R. C. P., M. R. C. S. Philadelphia: J. B. Lippincott & Co. London: Smith, Elder & Co. 1879. (A. Williams & Co.)

Chloral Inebriety. Read before the Kings County Medical Society, April 15, 1879. By J. B. Mattison, M. D. Brooklyn, N. Y.

How to Elevate the Standard of Medical Education and Medical Teaching. By A. B. Cook, A. M., M. D. (Reprint from the American Medical Bi-Weekly.) Louisville, Ky. 1879.

Neurological Contributions. By William A. Hammond, M. D., assisted by William J. Morton, M. D. Vol. I. No. 1. New York: G. P. Putnam's Sons. 1879.

An Address commemorative of the Life and Writings of the late Professor Charles Frick, M. D. By Frank Donaldson, M. D. Baltimore. 1879.

Proceedings of the Southern Illinois Medical Association. 1879.

Nouveau Guide pour l'Etablissement thermal d'Ischl. Par le Dr. Gustave de Kottowitz. Vienna. 1879.

Typhoid Fever: Its Cause and Extent in Melbourne. Also Remarks on a Review of the Report on the same Subject. By William Thompson, F. R. C. S. Melbourne, Sidney, and Adelaide: George Robertson. 1879.

Excision of the Epiglottis. By William Porter, A. M., M. D. St. Louis. (Reprint from The American Journal of the Medical Sciences.)

Paresis of the Sympathetic Centres from Over-Excitation by High Solar Heat, long continued and suddenly withdrawn, etc. So-Called Malaria: Its Ætiology, Pathogenesis, Pathology, and Treatment. By Charles T. Reber, M. D. St. Louis: George O. Rumbold & Co. 1879.

On the Treatment of Pregnancy Complicated with Cancerous Disease of the Genital Canal. By G. Ernest Herman, M. R. C. P. London. (Transactions of the Obstetrical Society of London.) 1879.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. C. — THURSDAY, JUNE 5, 1879. — NO. 23.

LECTURES.

TWO LECTURES ON THE MODERN ART OF PROMOTING THE REPAIR OF TISSUE.¹

BY HENRY J. BIGGLOW, M. D.,

Professor of Surgery in Harvard University.

FIRST LECTURE, 1876.

THE new art of promoting repair of the animal tissues combines the so-called antiseptic method with other expedients hardly less important. Its object is to facilitate cell growth and cell transformation. This it accomplishes in a remarkable manner.

Antiseptics arrest decomposition in all stages, — not only advanced decomposition, characterized by odor, but also the beginning of the process, which dates from the introduction of germs through the atmosphere. With germs we have putrefaction or fermentation; without them we have none. These germs float, in small proportion, among the particles which are visible in a sunbeam. The object of the antiseptic method is either to destroy their vitality, or, by filtering the air, to exclude them. The process gets to be a matter of routine, and of a dozen methods of accomplishing it there will always be, as at the present time, a best and latest one. But whatever be the means employed, no half measures suffice.

I doubt whether any surgeon approaches for the first time certain machinery of the antiseptic method without distaste. It flatters neither the vanity nor the scientific sense to exorcise an invisible enemy with something very like a censor. But after two years' experience, I have accepted the new doctrine with most of its details. I have learned that, whatever be his method, the duty of the surgeon is to act as if all the particles made visible by a sunbeam were noxious, falling like snow-flakes during every operation and every dressing, seeking to insinuate themselves into the wound at every crevice. His aim should be to destroy the actual intruders, and effectually to exclude their thronging companions.

While partial measures facilitate repair, and a pure air promotes it, there can be no question that the average result is signally improved by a thorough "antiseptic" dressing, and that the worst cases often thrive under it in a way hitherto wholly unexampled.

¹ Delivered before the medical class of Harvard University.

DISCOVERY.

Let us first give the credit of the new art to Mr. Lister, and then look briefly at the theory and its surroundings.

Like other germs, the germ of knowledge, in the form of suspicion and hypothesis, is always floating in the air. He who first assembles imperfect and detached ideas, and by their means establishes a proposition beyond a doubt, and then brings his demonstration home to the conviction of the world, — a measure which is all-important to his claim, — has fulfilled every condition essential not only to the private and secret discoverer, who has no claim to the world's gratitude, but also to the public discoverer, who lays the world under obligation, and is on that account recognized by it.

Lister is entitled to the merit of inventing a new and invaluable system of promoting repair. Antiseptics and drainage had indeed long been known, but upon these expedients Lister erected an entire art, developed it, and taught it with untiring perseverance till it was recognized. To Lister's hypothesis belongs the additional merit of being no accident. It had a distinctly scientific source in the experiments of Pasteur.

THEORY.

Pasteur, as many of you know, showed that decomposition occurs only where certain microscopic organisms are present. He further showed that the germs of these organisms always exist in the atmosphere, and that the organisms reproduce themselves. If you exclude them decomposition does not take place, and, so far as we know, cannot do so.

Tyndall repeated Pasteur's experiments. His glass box is familiar. Painted inside with some adhesive substance, it was allowed to stand until the particles in the contained air had settled or adhered. When a ray of light, passed through the box, showed that there were no particles to be illuminated, decomposition no longer occurred. Any animal or vegetable fluid sterilized by heat might remain in it for months unchanged. On admitting the atmosphere, with its dust glistening in the sunbeam, or the electric ray, organic fluids became at once putrid.

There is another familiar and more curious experiment. Let a fluid of this sort be placed in a test tube, the mouth of which is attenuated for a few inches, and bent to a zigzag form, but left open. The air drawn in and out, as the temperature changes, seems to lodge and leave its germs at the angles. At any rate, in such a tube boiled urine will not putrefy for years. Break the little tube so as to admit air freely with its particles, and putrefaction occurs at once. This experiment is the more curious because it would seem probable that the germs cannot be all excluded from the tube, but that a few must pass in, when the cavity inspires air at every decrease of temperature, — just as dust insinuates itself under the crystal of a watch, or beneath a picture frame, streaking the engraving.

Whether we filter the air, and so strain off the particles, or annul their influence by antiseptics, or by extremes of heat and cold, the result is the same. Canned provisions are first boiled, and then hermetically sealed. The cook boils the syrup or ketchup, or roasts the meat, to keep it from spoiling.

Refrigerators are necessities of civilized life; and the modern brewer consumes many thousand tons of ice to cool his beer to a point which, while it allows the beer fermentation to go on, will prevent an acetic or other unwished-for change, and so keep the beer from spoiling.

The change here alluded to is a form of fermentation. All fermentation is distinguished by the fact that the height of the process is characterized by the greatest abundance of little organisms. When the fermentation is over they die and fall to the bottom, and the liquid becomes clear. This happens during putrefaction, and is considered evidence that the latter may be a form of fermentation, dependent on the presence of a bacterium developed from a germ. Just as the fermentation of beer, for example, depends upon the presence of yeast, so putrefaction depends upon another ferment, of which particles floating in the air are the seeds.

But even if the germ should prove to be not the seed of a ferment, but only a coincidence which science has been unable to separate from some other and essential mechanism of putrefaction, it is nevertheless its infallible measure and indication, and this is all the surgeon needs to know. He may be satisfied with the practical deduction that to prevent decomposition in a wound he must prevent the entrance of the active particles of the air.

GERM THEORY OF DISEASE.

Let us here dwell a little on the germ theory of disease, which is sometimes discussed in this connection, as a branch of the same subject. We have seen that putrefaction is doubtless one form of fermentation, just as the fermentation of wine, beer, and vinegar is another form. Now, because certain diseases have, like fermenting fluids, a period of incubation, of activity, culmination, and decline, and because they exactly reproduce themselves, or "breed true," it has been argued that they are also dependent upon some form of germ or ferment. And because in a very few diseases, notably in splenic fever, Davaine and Pasteur have detected not only bacteria, but distinctive ones, essential to the disease, it has been assumed that all epidemics travel by the floating germs of their own bacteria.

Further than this, it has been maintained that if common decomposition and epidemics are alike due to germs, then localities which are known to harbor and breed the germs of the one, will be likely to harbor and breed those of the other; for example, that, in a case of diphtheria or typhoid fever, the drains or water-closets where matter is resolving itself into its elements are most likely to harbor and breed the germs of these diseases with others.

A dung-heap near a well was supposed to explain a typhoid epidemic among those who drank the water. More remarkably still, an alleged typhoid epidemic among the customers of a certain milkman was said to be caused by the infection of his milk-cans, because they were washed in a river which, a mile or two above, flowed past a small quantity of human excrement from a typhoid patient on the banks. In considering such suppositions, we must not forget the array of negative facts that render them doubtful.

If by "material" agencies of disease we mean that its proximate cause occupies space, and moves in it, we may be correct. The bulk of one sper-

matozoön may suffice to contain billions of specific atoms. But it is quite another question whether an eye or lens will ever be able to identify in the spermatozoön either the hereditary germ or the predisposing soil of gout, because it has discovered the bacterium of splenic fever, or the spore of pityriasis versicolor, or the itch insect, or the flea, or the African lion which follows an Arab village, or any other organism which gets its living directly or indirectly off the human race, singly or collectively, and is to that extent parasitic and noxious. We cannot too strongly remember that something very like decomposition is going on everywhere inside and outside the human body, and that it does not usually produce any insidious effect.

It is proper to enjoin cleanliness and the removal of obviously predisposing causes, even without deciding whether the germs of diphtheria, or of scarlatina, or of yellow fever inhabit a drain with the bacteria of putrefaction, or whether they develop in preference in the all-surrounding air, and thence devastate a town, or cross a continent, under conditions of which we know little.

EXPERIMENTS.

I am quite willing to avow, after two years spent in devising new antiseptic details, most of which you have seen in the surgical wards, that I have at last come back to something very like Lister's method as more convenient and efficient.

As no doubt some of you will be likely to try for yourselves experiments in this direction, and faulty ones, perhaps, I cannot do better than to briefly refer to some of my own, with the reasons for them.

Disinfectants act in two ways. For example, chloride of zinc and salicylic acid act only by contact, and give out no disinfectant atmosphere. On the other hand, burning sulphur, chloride of lime, solutions of chlorinated soda and carbolic acid, have a great advantage in generating a gas or vapor which disinfects the surrounding atmosphere.

Some of us remember that during the war traveling agents professed to preserve corpses. A person of this description came to our dissecting-room, and by merely painting the surface and injecting the orifices of a dead body with a colorless liquid preserved the muscles from putrefaction for a period of six weeks in the months of July and August. I soon found this "paint" to be carbolic acid. Its extraordinary preservative properties, which are easily demonstrated upon meat, make it on the whole the best antiseptic for surgical use.

Mr. Lister's first article was published in the spring of 1867. In the autumn of that year, Dr. Heach, then my house-surgeon, dressed a couple of amputations in the way described by Lister. They did well. But other dressings did well also, so that the new method was abandoned.

Two years ago (1875), however, the evidence had so accumulated that I set fairly to work to try the experiment again, beginning with what seemed the most reasonable. I thoroughly washed ulcers and wounds in a carbolic solution, covered them with a cloth similarly wet, and then with rubber cloth to hinder evaporation. They did better than before.

My next step was to introduce the distinctive principle of non-disturbance.

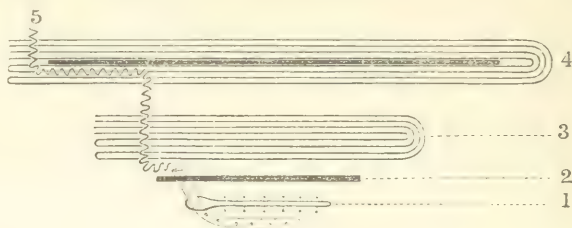
The late Dr. James Jackson remarked to me, when a student, that he was satisfied that surgeons were mistaken in adopting the then prevailing notions in regard to dressing wounds. He had himself seen better results when a wound was undisturbed, even at a sacrifice of cleanliness, than when it was daily "dressed." It was in pursuance of this hint that, more than twenty-five years ago, as I was lately reminded by a former house-surgeon, unless there were uneoward symptoms, I usually left the bandages upon an amputation, so long as a solution of chlorinated soda frequently applied to the outside would keep them odorless. The rule of *non-disturbance* was here enforced. Consider for a moment what must be the tendency of an opposite treatment, when newly-formed cells are daily washed with alkaline soap, perhaps dabbed with a sponge, or killed by a mass of charpie saturated with some alcoholic solution to stimulate them. It is a little remarkable that under such treatment ulcers heal at all. In short, I was early persuaded that the menstruum best adapted to the multiplication and transformation of cells was the fluid in which they are normally found,—that a pus or lymph dressing was the best; and my efforts were directed towards keeping this pus from decomposition. I now again attempted this.

A compress wet, as before, in a carbolic solution of one in sixty was applied to an ulcer, and covered with rubber to prevent evaporation. Beneath it a tube was inserted for the injection, twice a day, of the same carbolic solution. This dressing could be left without renewal for a week.

But the trouble of frequent injection was not its only imperfection. The surface of a cloth is too rough and absorbent to be placed in contact with growing cells. These multiply faster after the cloth has been floated off the surface by a thin layer of pus. To obviate this difficulty, gold-beater skin was interposed in contact with the ulcer. Its soft surface was all that could be desired; but, unluckily, two days sufficed to dissolve it. Carbolyzed bladder was next tried, and did well, but proved a little stiff and dry. Curiously enough, the growing cells ("wandering") penetrated its moist surface, so that when it was raised they were torn off bleeding. I now adopted the smooth, but impenetrable surface of oiled silk. This answered admirably, and I had at last reached the expedient long before employed by Lister.

Under such a dressing an ulcer not only exudes the thin layer of fluid in which the cells thrive, but its surface and margin become as uniformly smooth and glassy as the oiled silk which molds them. Such a surface contrasts strongly with the inflamed and corrugated exterior of an ulcer dressed, for example, with charpie and tincture of myrrh. The cell transformation is now the very horticulture of repair. The pink cicatricial edge rapidly contracts around the wound. Besides this, if you desiccate the surface by blowing upon it, you discover a concentric glistening film of cuticle, previously invisible, which may attain, in a large ulcer, the extraordinary width of a quarter to three quarters of an inch in a week,—preparing the way for the cicatrix which follows. Such is the result when the surface has been flattened and polished by the glazed and impervious surface of oiled silk, while the atmospheric germs have been effectually excluded from it. This last being a fun-

damental condition of success, we will now consider it as practiced and prescribed by Lister. A diagram will make this plain.



LISTER DRESSING.

1. Represents a wound containing a drainage tube.
2. Is a protective of oiled silk in contact with the wound, overlapping its edge, and traversed by the drainage tube.
3. A layer of folded and carbolized muslin, which largely overlaps the protective.
4. A final layer of folded carbolized muslin, containing a single rubber cloth. The latter has the distinct duty of diverting the discharge and delaying its direct progress to the surface. It thus retards decomposition, which occurs in the fluid soon after it has soaked its way to the air, and is then rapidly communicated to the wound.
5. Represents the path of the discharged fluid, when diverted by the rubber cloth.

The same dressing is to be wrapped about the extremity of a stump, or carefully fitted to the curved surfaces of the chest and shoulder, — for example, after excision of a breast, — and the whole is then bandaged.

A dry spot of discharge appearing on the surface of the bandage may perhaps be overlooked. But if the discharge soaks through it, and the stain grows larger, the whole dressing must be renewed at once. This happens the day after the operation; then perhaps several times in a week; later, more rarely. It is desirable that the carbolized covering should exert an antiseptic influence for many days, or, as sometimes in a knee excision, for several weeks, without renewal. This is the object of the muslin, a coarse and cheap fabric impregnated with carbolic acid, which is mixed with rosin to hold and slowly deliver it, and with paraffine to make the rosin flexible.¹

Briefly to recapitulate: the wound is covered with oiled silk, and with fifteen or twenty layers of carbolized muslin containing a rubber cloth, and then bandaged. Every precaution is taken to prevent the contact of germs,

¹ The following is the method of making the carbolized muslin: —

Crystallized carbolic acid	one part.
Common resin	five parts.
Solid paraffine	seven parts.

Melt the two latter in a water bath, and add the acid while stirring.

The muslin employed in our hospital is of cotton, and known as Colerain or strainer cloth.

The hot mixture is sprinkled upon the muslin with a large brush. To further diffuse the carbolized mixture, the muslin is then folded small, and subjected to pressure in a tin can, for several hours, at the temperature of boiling water.

whether during an operation or a dressing: the wound, the skin, the cloths, the surgeon's hands, the instruments and sponges, being all repeatedly washed in a carbolic solution.

LISTER'S ATOMIZER.

The atomizer, which blows a cloud of spray, of the strength of one in forty, upon a wound, whether during an operation or a dressing, is an essential feature of Lister's method. It certainly adds nothing to the immediate comfort of the surgeon. But it seems to be an available substitute for a part of the washing and stopping incident to the use of antiseptics in a fluid form, and is in that respect a great convenience. This is especially true of a dressing in bed. Its efficiency could hardly have been anticipated, but there is no reason to doubt it. Lister seems to have first tried a jet of fluid.

The result of a complete Lister dressing, spray included, is sometimes marvelous, — as, for example, in a resection of the knee, which may require to be dressed two or three times during the first ten days, and only as often during the next two or three months.

This method might be advantageously practiced for the first time under a sunbeam where the enemy is visible. Other methods will in time doubtless supersede it, but there is no reason to suppose that its principles can be neglected without largely impairing the average result. The fighting manual of exclusion may change from year to year, but an uncompromising hostility to germs will continue to be an abiding article of surgical faith.

DRAINAGE.

We are now to consider another point of great importance. Fluid contents accumulate in a closed wound. If you remove a fatty tumor from the back, you will find it difficult to get a permanent union by first intention. A sanious fluid collects beneath the uniting integuments, and the wound becomes an abscess. This often happens after excision of the breast, of tumors under the angle of the jaw, and beneath the flaps of amputation. Ligatures and stitches encourage such abscesses, and are often responsible for them.

It is therefore a cardinal point in the treatment of every closed wound to evacuate this sanious fluid by inserting in the wound, before dressing it, a "tent" over which the flaps may heal. Such a tent is a small rubber tube perforated with holes, and inserted in a dependent part of the incision, deep enough to insure its drainage. It passes through the oiled-silk protective, and is then cut off and secured by a string, so that it may deliver the fluids outside the silk into the muslin. Every considerable sinus afterwards occurring about a wound must be thus drained. During the healing of a wound nothing is so insidious as the burrowing of pus, which may occur even when it is not wholly imprisoned. It travels by its own weight. I have formerly and repeatedly impressed on you the necessity of free incisions for its evacuation at the nearest surface which it is safe to cut. In these days such incisions should be tubed, and their interior injected and carbolized. If you cannot cover them with antiseptic dressing, let them be carefully and thoroughly injected with a carbolic solution of one in sixty, or one in forty, twice a day, and placed under a carbolic drip.

The drainage tube is withdrawn gradually and slowly, in view of the fact that any premature closing of the interior surely results in abscess.

Horse-hair and other materials have been suggested as substitutes for the rubber tube, but not, as I think, with advantage.

LIGATURES.

A common silk ligature, cut short and left upon an artery, after some months decomposes and disappears. But catgut, even when carbolized, and whether employed as ligature or stitch, deliquesces in a few days, and so repays the trouble of its use. Once applied, it needs no thought, and in fact generates in its immediate neighborhood a wholesome carbolic atmosphere.

ANTISEPTIC SUBSTITUTES.

If you have no atomizer, drench the wound or compound fracture inside and out with a solution of one in forty; or wipe it out and pour in carbolized oil,¹ as originally recommended by Lister in the treatment of compound fracture, and then get the wet and wide-spread dressing quickly into place, with oiled silk next the wound,—or, if you have none, wet and carbolized cotton batting, or folded cotton cloth, or both. A limb thus dressed, or even without dressing, may be placed under a drip, as in the two cases of open knee-joint in our wards, where a wick-yarn siphon leads the antiseptic fluids to a cloth lightly laid on the gaping wound, while another below the limb conducts it from a rubber sheet to the floor. On the body a drip is less available than on a limb. You may remember that a pile of burnt flour is an old and good dressing for certain ulcers. Carbolyzed sawdust or bran has been advantageously substituted for flour upon a carbolyzed wound.

Guerin's cotton-wool dressing effectively filters the air, especially if the inner layers be wet and carbolyzed. But the outer and dry layers should be several inches in thickness, and largely overlap the wound or wrap the limb. The surgeon undoubtedly obtains excellent results by this method.—the carbolic element, which adds greatly to its efficiency, having been adopted from Lister.

CARBOLIC POISONING.

When a large surface has been dressed with a carbolic lotion for a considerable time, the system may suffer from its absorption. The most striking toxic indication is a dark bluish-green color in the urine; there is also prostration. It is then necessary to discontinue the carbolyzed fluid. Salicylic acid may be substituted.²

I have purposely deferred until the conclusion of this lecture two matters of importance. The first is the relation of repair to the pulse and temperature; the second, its relation to coagulum. The first of these points has great practical interest.

¹ One part carbolic acid in six to fifteen parts of linseed oil.

² Water dissolves, of salicylic acid, only about one part in three hundred; but the addition of eight parts of borax to boiling water enables it to dissolve ten parts in one hundred. Alcohol dissolves salicylic acid, and the solution may be then mixed with water to impregnate cotton-wool. The addition of a little glycerine keeps the pungent dust from the atmosphere, if the cotton be used after drying.

I. INDICATION OF ABSCESS IN THE WOUND.

In the old method of dressing wounds, hemorrhage and suppuration announce themselves at the surface. But you will ask, as I did, How can we ascertain whether a mass of antiseptic covering may not imprison or conceal an abscess fatal to union, and possibly disastrous to the patient? Fortunately, an abscess in the wound unfailingly and at once reveals itself by an elevation of pulse and temperature. An abrupt protrusion upon the zigzag lines of the carefully kept chart peremptorily directs attention to the wound and a renewal of the dressing.

Such an abscess must be at once freely evacuated, carbolized, and tubed, whether it be again protected by a close dressing or by a lighter antiseptic covering.

II. COAGULUM.

When dealing with a wound which is to be covered by integument, the surgeon cannot exercise too much patience in tying all the vessels. Fluids may, notwithstanding all his care, collect in the cavity. The mere washing of a freshly cut surface with a carbolic solution of one in forty excites the capillaries so that effectual drainage becomes essential. In a closed wound we aim by the careful drainage of blood and serum to secure a permanent contact of the surfaces. But in an open wound a coagulum may be turned to good account. Its exact behavior is less important. Physiologists incline to the opinion that it does not itself become transformed, but that new tissue penetrates into its interstices. It may thus become an admirable dressing, provided only we prevent its death and deliquescence. This is quite possible by thorough antiseptic protection.

CASE OF *CESOPHAGOTOMY*.¹

BY A. B. ATHERTON, M. D., FREDERICKTON, N. B.

PREVIOUS history: Mrs. F., aged seventy, multipara, has had asthma for ten or fifteen years, and suffers nearly all the time from a cough, with considerable expectoration. Otherwise her health is good. The patient was always thin.

At noon, August 28, 1877, while eating some lamb, she swallowed a piece of bone, which stuck in her throat and caused a good deal of choking. While I was being sent for, she succeeded, by external manipulations with thumb and fingers, in working the foreign body down as far as the lower part of the neck. I was soon in attendance, and by means of oesophageal forceps and horse-hair snare endeavored to withdraw the foreign body, but without success. I also made some slight attempts to push it down into the stomach, but it could not be moved from its position. Much distress and pain were caused both by presence of the bone and by my efforts to dislodge it.

August 29th. The suffering was so great that scarcely any sleep had been obtained. The cough was very troublesome, and she felt something sticking in the throat when she tried to expectorate. She swallowed with pain and difficulty. Pulse 100, feeble. *Cesophagotomy* was advised and consented to.

¹ Communicated to the JOURNAL, at the author's request, by D. W. Cheever, M. D.

Operation. — Chloroform was given for a few minutes, till she was partially anæsthetized, and then ether was substituted. An incision three or four inches long was made on the left side of the neck at the inner side of the sterno-mastoid, but not quite so obliquely as that muscle runs. The anterior jugular vein lay so much in the way that it was divided, and bleeding from it was controlled by torsion. After getting through the superficial fascia and platysma muscle, there came into view the anterior belly of the omo-hyoid, which with the sterno-mastoid and carotid vessels was drawn to outer side. By use of director and handle of knife the posterior part of the trachea was reached. Now a sponge probang was passed through the mouth into the œsophagus, till it brought up against the obstruction. The sponge could be felt somewhat indistinctly at the bottom of the wound, and, after considerable searching, just below it and at the lower end of the incision was discovered a hard body with a rather sharp outline. A slight touch of the knife brought into view the upper end of a piece of bone, which was seized by forceps and extracted. It proved to be a portion of lamb's rib, having obliquely cut ends and measuring rather more than one and one half inches from tip to tip. It lay nearly straight up and down in the œsophagus, but its rough, jagged ends prevented its being readily dislodged.

I omitted to mention that upon coming down upon the deep tissues I found them swollen, and the parts about the œsophagus infiltrated with what appeared to be sero-purulent matter. Also some bubbles of gas escaped before I cut into the œsophagus. The wound was sopped with carbolic acid and water, one to eight. Also three stitches were put in the upper part of the incision. The rest was left open. Carbolyzed oil dressing.

Eight p. m. Patient has had a good deal of distress from thin mucus in air passages, giving rise to almost constant cough and expectoration; also considerable pain in neck, and soreness in chest and between scapulæ. Latter relieved somewhat by poultices. Pulse 112. Oat-meal gruel (strained) given by enema; one half pint in quantity. August 30th. Enema was not retained. Slept but little. Otherwise as yesterday evening. About four ounces of gruel given this morning. Twelve a. m. Enema not retained long. Repeated at visit. Nine p. m. Enema came away in half an hour. One of beef tea given this evening, two or three drachms of brandy being added. August 31st. Slept rather more than on previous night. Retained enema. A good deal of pain and soreness of neck, increased by cough. Pulse 96. Enema of last evening repeated. Nothing but a little water allowed by mouth since operation. September 1st. Last two enemata given yesterday were returned almost immediately. Very restless all night. Pulse 96. Very feeble. Patient looks haggard, and moves in bed with difficulty. Wound appears sloughy since yesterday, and smells foully. Enema given at visit, but was soon returned. Four p. m. A tube passed into stomach and one half pint of brandy and milk injected. Nine p. m. Seems rather better, and moves with greater ease. Pulse 88. Enema of beef tea and brandy tried again. No opiate added, through fear of ill effects upon expectoration. For same reason none has been given by mouth since operation. September 2d. Retained enema, but slept little. Cough very troublesome, and expectoration thicker and more purulent. Looks about as yesterday morning. Pulse 92. Weak. Tube introduced into stomach and more than one half pint of milk with a tablespoonful of brandy injected. Two p. m. Beef tea and brandy injected into stomach. Seven p. m. Looking brighter. Cough still pretty severe. One pint of milk and an ounce of brandy administered by tube. September 3d. Slept pretty well. Cough not so bad. Swallows some nourishment, and thinks that when head is turned to right side very little runs out of wound. Asks to stop, therefore, taking food by tube. Pulse 92. Sutures removed from wound, which still looks sloughy. Two p. m. One pint of milk and

an ounce of brandy again introduced into stomach. September 4th. Doing fairly. Cough still troublesome. Took some broth in night, and an egg-nog this morning. Slough pretty well off wound, but skin on its edges is red and irritable looking. This is probably in part due to escape of liquids that are swallowed. Pulse 88. Bowels regular. September 6th. No food injected into stomach yesterday. Does not seem quite so well. Wound looks more sloughy. A large piece of dead tissue removed from deeper part of wound. September 7th. Gave two meals by tube yesterday. Seems rather stronger to-day. No food, except brandy and water, to be swallowed till none comes out through wound. This assented to reluctantly by patient, who dislikes very much the introduction of tube. Discharge is copious this morning, and some more sloughy tissue removed. September 8th. Wound less open and not so inflamed. A smaller tube used to-day, No. 8 catheter. No. 12 causes some bleeding. Has had two meals a day of milk and brandy for last few days. Seems a little nauseated by a pint; to have less than that amount, and it is to be given three times in the day instead of twice. September 10th. Cough continues troublesome. Mustard poultices relieve it somewhat. Simple enemata used to procure motion of bowels when required. September 15th. Wound healing. Cough so troublesome that Dr. Coburn gave an enema of chloral to produce sleep. September 22d. For last few days Dr. Coburn gave a bromide of potash and tinct. lupulin mixture, with good effect on cough. Wound nearly healed. No fluid passes out of wound on swallowing. May therefore omit use of tube, and take soft solids and liquids *ad libitum*. September 29th. Swallows well. October 2d. Wound entirely healed. Able to go out-of-doors.

Remarks. — At the time of writing, February 13, 1879, the patient swallows without difficulty, and with the exception of her old asthmatic cough is quite well.

I would state also that I am much indebted to Dr. Coburn, who in my absence conducted the patient safely through her sickness after September 10th. In another case I should not allow nourishment to be taken so soon by the mouth, for I cannot help thinking that the wound was made unhealthy by its contact as it escaped externally.

RECENT PROGRESS IN DERMATOLOGY.

BY JAMES C. WHITE, M. D.

Classification of Skin Diseases. — The system of classification and nomenclature adopted by the American Dermatological Association at its last annual meeting, and published without comment in the JOURNAL for December 12, 1878, is presented to the profession by the committee¹ not as a perfect scheme, but as the result of long-continued study and effort on their part to simplify systems now in use. As it was modeled upon that of Hebra, a brief notice of some of the modifications adopted will be of importance, as there can be no doubt that it will commend itself in time to the medical profession of our own country at least. In the first place, Hebra's twelve classes are reduced to nine by dropping the first two, hyperæmiæ and anæmiæ, as artificial and unnecessary, and by placing his two groups of benign and malignant new growths under one class. The classification as thus amended is as follows: I. Disorders of the glands. II. Inflammations. III. Hemorrhages. IV. Hypertrophies. V. Atrophies. VI. New growths. VII. Ulcers. VIII. Neuroses. IX. Parasitic affections. The first class is the same as the third of Hebra's, excepting

¹ Transactions of the American Dermatological Association. D. Appleton & Co. 1879.

the introduction of that fugitive affection of the sweat glands, miliaria crystallina. The second class comprises the first, second, and fourth of Hebra, and substitutes for his term, exudations, the more comprehensive title, inflammations. His separation of the erythemata, for instance, into hyperæmic and exudative forms is forced and unnecessary; no such distinction can be drawn between the two processes excepting in degree. This class, inflammations, is of course a large one, and comprises a great part of the most common diseases of the skin, over twenty distinct affections. No attempt has been made to group them, as Hebra has done, because his arrangement is incongruous, useless, and not even correct, as such attempts must be. The affections are arranged mainly in the order of the pathological processes they represent and according to their natural relations as far as possible. Some changes have been made in membership of the class. As many of the affections it contains may pathologically be called dermatitis, the meaning of this term, as employed to represent a distinct disease, has been specifically defined to indicate acute conditions not included under other titles of this class (the forms traumatica, venenata, and calorica being recognized); for some forms of artificial eczema are nothing but a dermatitis venenata, for instance. Pellagra has been excluded as of doubtful existence as a distinct disease; roseola, also, for the same reason. Phlegmona diffusa has been introduced, and glanders omitted. Lichen planus and ruber are recognized, but the ordinary simple forms, so called, are included under eczema, and lichen scrofulosorum is excluded. Hebra's three forms of acne, disseminata, sycosis, and rosacea, are included, so far as they exist, under the simple term acne. Non-parasitic sycosis is merely acne in the beard, and rosacea has been transferred to Class IV., hypertrophies of connective tissue. Seven stages or clinical varieties of eczema are recognized by subtitle. Under the fourth class, the same anatomical groups are retained, but several changes in nomenclature are made. Under the pigment group, lentigo is recognized, but all other forms of melanoderma are included under the single term chloasma. In the hypertrophies of the papillary and epidermal layers keratosis pilaris and senilis (lichen pilaris and senile epidermal accumulations) are introduced, and so is the title xerosis, to indicate the xeroderma (dry skin) of the English writers, and to avoid the confusion which has arisen from the use of this word with another meaning by German authors. Morphæa has been placed here, under hypertrophies of connective tissue, at least until we understand its nature better. Here, too, the title rosacea has been placed, to signify the excessive growth of the integument of the face, both in its erythematous and hypertrophic stages. In Class V., atrophies, the disease called by Hebra and Kaposi xeroderma has been stricken out. The name is wholly an improper one for it, and, moreover was in use for a well-known and simple affection, which is to be called xerosis, as just stated. For the former grave and complex disease the title angioma pigmentosum et atrophicum is proposed to express its pathological relations, and it has been transferred to its proper place among the new growths in Class VI. Among the latter class, which includes the eighth and ninth of Hebra, neuroma has been introduced, and the term fibroma substituted for molluscum fibrosum. The word angioma has also been substituted for the various terms employed to denote new growths of

Excretion of Iodine. — Adamkiewicz states¹ that he has demonstrated the presence of iodine in the pus taken from the eruption produced by the administration of iodide of potassium by the starch and nitric acid test. The quantity was of course exceedingly minute. He infers from this that iodide of potassium is excreted by the sebaceous glands, and, being decomposed in them by the products of cell disintegration, the free iodine causes the inflammation of the gland. Inasmuch as the iodine efflorescence spares those portions of the general surface which are provided with sweat glands alone, the palms and soles, he concludes that it is not these but the sebaceous glands which are the cause and seat of the eruption.

Excretion of Bromine. — Guttman² has also demonstrated the presence of bromine in the pus of the acne pustules of a patient who had been taking bromide of potassium for a long time.

Exfoliative Dermatitis of Nursing Children. — Ritter von Rittershain describes,³ under this title, an affection which has been observed in two hundred and ninety-seven cases, during the past ten years, in the infant asylum at Prag, with a mortality of fifty per cent. The prodromal stage, consisting of a dryness of the skin, is followed by an erythema, beginning generally upon the lower half of the face, and spreading with more or less turgescence over the whole surface. At the same time fissures are formed about the mouth, and the mucous membrane within is covered with an exudation. The child remains generally without fever, and nurses well. In a few days the epidermis becomes separated by the effusion beneath it of fluid exudation, and is cast off in large and small masses, leaving red excoriations which soon dry, or crusts. The cuticle upon the hands and feet comes off in glove-form. Occasionally the eruption resembles a fine vesicular eczema, or pemphigus-like bullae are observed. The brownish-red excoriated patches assume rapidly a brighter color, and are followed by a fine desquamation. The whole process generally lasts but a week or ten days. Occasionally it is followed by prolonged furunculosis and phlegmonous and gangrenous inflammation. Post-mortem examination fails to reveal the cause of the cutaneous manifestations.

Histology of Dysidrosis. — Dr. Tilbury Fox and Dr. Crocker, of London, publish⁴ in a separate form their latest contribution to the literature of this much-mentioned affection. As stated in former reports, we differ from Dr. Fox in regarding it as essentially a disease of the sweat glands, and consider it to be a dermatitis, the vesicles of which do not differ materially from those in palmar eczema, especially those which occur in cases of artificial origin. In their article the authors adhere to their original opinion, and give seven figures illustrative of the minute anatomy of the disease. From this study they conclude that it is an "affection of the sweat apparatus, in which the ducts in the Malpighian layer probably become choked, but certainly distended, which is followed by the escape of fluid from them into the tissue around, giving rise to the formation of characteristic vesiculations, which are at first imbedded in

¹ Medicinisch-chirurgische Rundschau, January, 1879.

² Medicinisch-chirurgische Rundschau, February, 1879.

³ Centralbl. für med. Wissensch., from Central-Zeit. für Kinderheilk., 1878, No. 1.

⁴ Transactions of the Pathological Society of London, 1878.

the skin, but afterwards, in consequence of the increase of the effusion, enlarge so as to cause uplifting of the cuticle and the formation of loculated bullæ." The question to be determined is the nature of the fluid of the vesicles. If Dr. Fox can demonstrate that it is perspiration and not serous, such as is found in all other forms of dermatitis, his sections and deductions from them would be unnecessary; until he does this we must decline to regard them as settling the question, especially as they conflict with the results of similar anatomical investigations made by other observers. (See notice of Dr. Robinson's paper in JOURNAL of December 13, 1877.)

Treatment of Psoriasis by Immersion.—Dr. Balmanno Squire reports¹ a case of extensive psoriasis treated for six weeks by immersion for several hours a day in a warm bath. At the end of this time the disease had greatly abated, and the cure was finished by chrysophanic acid ointment. The action of prolonged bathing upon psoriasis has been fully tested in the baths of Leuk and by Hebra's continual bath.

Acne in Flax Mills.—Dr. Purdon, of Belfast, Ireland, reports² the occurrence of a peculiar form of acne upon the fore-arms of operatives in the linen mills of that district, the great centre of this industry. It affects principally the young girls who remove the bobbins from the machines and oil the same, and the spinners. The skin of the arms is harsh, dry, and covered with a papulo-pustular efflorescence, having a "shotty" feel in its early stage, and is accompanied by numerous comedones. The eruption is frequently observed upon the face, and is accounted for by wiping the face while it is perspiring with oily hands. The disease is attributed to the oil used for the machinery, and to the oil, also, contained in the flax. A certain description of Russian flax is supposed to produce a pustular eruption closely resembling that in variola. A chemist of Belfast is stated to have obtained from flax fibre a volatile oil. Treatment in the affection seems to be of little service as long as the patient remains in the mill.

(To be concluded.)

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

A. M. SUMNER, M. D., SECRETARY.

OCTOBER 7, 1878. *Involution of Uterus.*—DR. E. H. STEVENS, of Cambridge, read the regular paper, on A Case of Involution of the Uterus, which was published in the JOURNAL for February 20, 1879. — DR. H. I. BOWDITCH asked if it was not customary to keep patients in bed for a longer time than stated by the reader. He also inquired what was the cause of the pain spoken of after the first attempt at reduction. DR. STEVENS replied that the patient was so hard to manage that she could not be kept in bed longer than the time mentioned. The pain spoken of was caused by the deep wire sutures which had been passed through the cervix. — DR. C. P. PUTNAM inquired if it had

¹ The Clinical Society's Transactions, vol. xi.

² Archives of Dermatology, January, 1879.

been recognized at the time of the first attempts at reduction that the uterus had not been replaced entire, and if a distinct ring could be felt. He had seen cases where such a ring could be felt. Dr. Putnam stated that it was his opinion that if a uterus were once entirely replaced it did not have a tendency to come down again.

Croton Chloral in Neuralgia. — DR. H. I. BOWDITCH reported a case of facial neuralgia which had been relieved in a decided manner and without any unpleasant effect by three five-grain doses of croton chloral, after all other drugs had failed to give relief. — DR. WILLIAMS stated that he had often used it with advantage instead of opium, after operations about the eye. The chloral had no unpleasant effect, and he thought it safer. — DR. J. O. GREEN remarked that he had used this drug at the City Hospital in cases of neuralgia of the head, and had obtained a wonderful effect in one case.

Dysmenorrhœa and Tape-Worm. — DR. BIXBY reported a case of a young woman with dysmenorrhœa. Upon her second visit he found that she had a tape-worm. Upon appropriate treatment twenty-five feet of the worm, with the head, was dislodged. Since then the patient has had no dysmenorrhœa. — DR. H. I. BOWDITCH said that formerly in all cases of dysmenorrhœa a strong cathartic was administered, and asked if, in view of the above case, it would not be good practice to do so now.

OCTOBER 21, 1878. *Croton Chloral.* — DR. BOWDITCH wished to state that in the case of neuralgia reported at the last meeting the pain had partially returned, and had to be relieved by narcotics and doses of croton chloral, and he did not find that the relief was as permanent as he thought at the last meeting.

Pleuritic Effusion. — DR. BOWDITCH said that he had a case of simple non-purulent effusion into the chest. He had drawn off the fluid six or seven times in the previous five weeks to prevent compression of the lung, and three or four months before, after tapping, he heard a rubbing sound throughout the chest to the point of puncture, and thought that it would not fill again; but after a rest of four months he found the chest refilled. He wished to ask whether he was justified in making a permanent opening in this case of serous effusion, and run the risk of its becoming purulent. He wanted to know if there was any objection to this mode of procedure under the circumstances. There was another reason why this should be done, namely, that within the past month enlargement of the heart had taken place, and he had seen two cases of this character where the patients died suddenly from heart disease. — DR. BRADFORD thought that the dangers Dr. Bowditch spoke of were very much less if the operation were done by the antiseptic method. He had seen many cases of empyema in Lister's wards, and some in the New York hospitals, and the danger to life was comparatively slight.

Malformation of Ureters. — DR. W. H. BAKER read a paper on Malformations of the Ureters, where the left ureter opened in the neighborhood of the urethra, and by operating he connected the ureter with the bladder, with perfect recovery of the patient. The paper was reserved for publication.

Hydrophobia. — DR. T. B. CURTIS read a paper on a case of hydrophobia,

with a fatal result, where the patient took thirteen and three quarters grains of Merck's curare in twenty-three hours. The patient continued to the end to display considerable muscular strength in his paroxysmal struggles. — Dr. J. J. PUTNAM said that he had been much interested in Dr. Curtis's paper, especially as he had previously had the opportunity of talking with him about it. There seemed to be no question that, as Dr. Curtis had said, the paroxysms were due to inhibition of the inspiratory centre, and he believed that this was due, not to any peculiar susceptibility of the inspiratory centre to inhibitory influences, but to the greatness of the inhibitory stimulus. The reason for this belief is that, as we know from the experiments of Wundt, the power of a nervous centre (or nerve fibre) to respond to an excitation by showing phenomena of inhibition, is one which implies, in proportion to the degree to which it is present, that the nervous tissue is in an efficient and healthy state, and that this is the first physiological property to be lost in case of disease from any cause. With reference to the nature of the powerful inhibitory influence which must be the immediate cause of the paroxysms, Dr. Putnam thought it was to be traced not to a hyperæsthetic condition of the peripheral nervous system, in favor of the existence of which there is no evidence, but to the peculiar mental condition of the patient: the paroxysms being thus to be regarded as parallel to the state of a person said to be "paralyzed with fear," etc., or that of a drowning man, struggling convulsively, and "catching at straws" for help which is in fact only removed the farther from him by his endeavors.

NOVEMBER 4, 1878. *A Complicated Case.* — The regular reader of the evening, Dr. DRIVER, read a paper entitled *A Complicated Case*: —

The patient, a female, having heart disease since girlhood, developed lung difficulty; then suddenly cerebral symptoms showed themselves, which were suspended to allow an attack of typhoid fever to run its course; after which the cerebral symptoms again manifested themselves, and the patient died. At the autopsy, made by Dr. Cutler, there were found a small aneurism the size of a bean in the right anterior cerebral artery filled with a dense laminated clot, and in the right middle cerebral a still smaller aneurism filled with clots, completely shutting off the blood supply to the right corpus striatum. This corpus striatum had softened and become necrosed, and in the latter process a peripheral vessel had been opened, which allowed of cerebral hæmorrhage, from which the patient died. There was disease of the mitral valve of long standing, with vegetations and stenosis. Broncho-pneumonia of both lungs, with tuberculosis of one, was found. The spleen was enlarged, with embolic infarctions of old date. In the intestines there were found typhoid ulcerations, with enlarged mesenteric glands. The liver was also enlarged.

Dr. MORRILL asked why, in view of the sudden nature of the attack and the existence of heart disease, embolism was not as probable a cause of the brain trouble as tubercular meningitis. — Dr. DRIVER replied that the heart disease was of long standing. — Dr. MORRILL said that embolism was not usually the result of recent cardiac trouble.

Ruptured Pericardium and Diaphragm. — Dr. DRAPER showed a specimen of ruptured pericardium and diaphragm, and gave the following account of the case: —

B. McD., thirty-eight years old, a vigorous Irish laborer, was standing upon a low platform at the edge of a sewer excavation, when a cart was carelessly backed against the

stage, throwing it and its occupant into the cut, a fall of twenty feet. The injured man was rescued after some delay, and died in twenty minutes from the time of the fall, having continued in an insensible condition from the outset. At the autopsy, nineteen hours *post mortem*, the only external signs of violence were some superficial abrasions of the forehead and face, with two small bruises at either side of the sternum, close under the clavicles. After removal of the sternum and costal cartilages a distention of the pericardium was noticed; incision of this part exposed a great quantity of clotted and fluid blood filling the cavity. Four fluid ounces of bloody serum were removed, leaving coagula in masses entangled in the old adhesions of the heart and pericardium. In the parietal portion of the pericardium, beginning just behind the apex of the heart and passing downward and to the right a distance of four inches, was a laceration involving the pericardium and the upper muscular layers of the subjacent diaphragm. The interventricular septum was also ruptured transversely. The liver showed four small superficial lacerations on the inferior surface of its right lobe. The right kidney presented five superficial tears, half an inch long, near the hilus on the anterior surface. This organ lay in a mass of fat which was much bruised and infiltrated with extravasated blood. The sternum was fractured through the centre of its body. The fifth and sixth ribs on the left side were broken just outside the nipple line. The left tibia and fibula were fractured transversely at their middle.

GREEN'S PATHOLOGY.¹

THE present edition appears two years after its predecessor, which has undergone a considerable degree of revision in the way of addition and subtraction. The same peculiarities which were referred to when the previous edition was noticed are still present, and the reader must continue to hope that the literary style of the author may be combined with a more thorough and critical display of his subject.

One of the first changes to be noticed is a different grouping of the several varieties of tumors. This, on the whole, is a change for the better, though it is difficult to understand the reason for placing the myxomata at the end of the list of tumors composed of simple forms of tissue. The consideration of mucous tissue naturally precedes that of other forms of connective tissues, except the fibrous, with which it is so closely related.

Special attention may be called to the introduction of a short chapter on scrofulous inflammation, and to the alterations in the chapters on tuberculosis and phthisis. Greater prominence, though perhaps too great, is attached to the presence of giant cells as a characteristic of tubercles.

The rearrangement of the section on pyæmia and septicæmia is to the manifest advantage of the reader, and tends to harmonize the theories of these subjects with the more recent views.

In the consideration of lesions from syphilis the omission must be deemed important where any criticism of Heubner's statement of the characteristic value of endarteritis is lacking. Furthermore, although Klein's paper on the changes occurring in scarlet fever is interesting, and not without value, still it is by no means of sufficient importance to call for the insertion of a section on scarlatinal nephritis. The changes in the kidney in scarlet fever essentially represent a diffuse nephritis, and the latter may result from other causes than the one mentioned.

¹ *An Introduction to Pathology and Morbid Anatomy.* By T. HENRY GREEN, M. D. Lond. Third American from the fourth revised and enlarged English edition. Illustrated. Philadelphia: Henry C. Lea. 1878. Pp. 331.

The chapter on thrombosis is still behind the times, especially in that part relating to the organization of the thrombus. There is no mention of the results of Baumgarten's work, which has done so much to throw light upon the nature of the changes taking place around and in the clot.

A considerable number of drawings, all excellent, have been added to this edition. Figure 73, however, better illustrates the alveolar changes in desquamative pneumonia than it indicates the early appearance of a miliary tubercle. If the tubercle has any characteristic, it is that of circumscribed growth within interstitial tissue. To give this up is to depart from the generally accepted view which elsewhere appears prominent in the book.

It may be stated now as before that "the physician who likes to know something of what has been done will undoubtedly be interested in this volume." It is better than its predecessor as more evenly representing prevailing views, and it helps to pave the way for a comprehensive, exact, and impartial work on pathology and pathological anatomy, which does not yet exist in the English language.

R. H. F.

DUHRING'S ATLAS OF SKIN DISEASES.¹

THIS part of Dr. Duhring's Atlas presents the portraits of four interesting cases of disease, — scabies, herpes zoster, tinea sycosis, and eczema vesiculosum. The first of these affections has become so rare of late years, in this part of the country at least, since immigration has almost ceased, that it is well-nigh impossible to make a clinical demonstration of its features to a class of students. A plate like the illustration here given, in which the author and artist have almost perfectly succeeded in imitating its characteristic minute lesions, becomes, therefore, an important aid in teaching and to the practitioner who has not had opportunity of acquainting himself with their appearances either in foreign hospitals or in past times at home. To picture the burrow of the itch insect successfully is almost an impossibility. The illustration of tinea sycosis, the advanced stage of ringworm of the beard, is remarkably good, the best representation of the disease ever published, we think. A study of it, in connection with the plate of sycosis non-parasitica in Part II., should make the diagnosis between these affections and eczema of the bearded face, so often confounded by the practitioner under the name barber's itch, an easier matter. The variety of eczema here illustrated (vesiculosum) is well chosen, because it is one of the rarest forms met with in practice. Vesicles in eczema, in spite of Willan's classification and the author's statement that they are "the typical expression" of the disease, are under our clinical observation the exception instead of the rule. The opinions of the latter, however, upon this point, as well as those expressed in the text concerning the other affections here represented, are of course more fully stated in his textbook, and are not now the subject of critical remark. As explanatory of the illustrations and descriptive of the cases selected, the text is wholly satisfactory.

¹ *Atlas of Skin Diseases.* By LOUIS A. DUHRING, M. D., Professor of Skin Diseases in the Hospital of the University of Pennsylvania. Dermatologist to the Philadelphia Hospital, etc. Part V. Philadelphia: J. B. Lippincott & Co. 1879.

FOX ON SKIN DISEASES.¹

IN preparing this edition for publication in the United States the authors state that they have increased the matter to about three times its original amount, and have rewritten it almost wholly. Its purpose, they say, is to afford assistance to the student in his early study of skin diseases, and to serve as a manual for ready reference to the practitioner in his daily practice. If such books are necessary, if these purposes are not better supplied by the more complete works on general dermatology, such, for instance, as the excellent handbook of the senior author, then this one is a success. It presents a very complete outline of modern dermatology, tinged, of course, by the writers' well-known views regarding classification and pathology, but on the whole fairly and broadly executed. It is such a book of its class as only one competent to write a full treatise upon the subject could have written.

The first part is general in character, treating of methods of observation, pathology, classification, ætiology, diagnosis, and therapeutics. In the second part individual diseases are described alphabetically, and methods of treatment quite fully given, reference being made to the abundant formulæ appended to the volume. Dr. Fox holds and here expresses opinions upon many points in dermatology, which actively invite discussion, but stated as they necessarily are, mostly without argument, they may well be left without discussion, especially as they have been amply criticised in connection with former publications. The American editor has inserted some interesting remarks upon peculiarities of skin diseases in the United States, and also the plan of classification and nomenclature adopted by the American Dermatological Association at its last annual meeting.

WOOD'S THERAPEUTICS.²

THE former editions of this work having already received from us extended notices, we merely call attention to the additional matter to be found in this last edition. Professor Wood informs us (page 74) that large doses (ten to twenty grains) of quinine have been proved to produce stimulating effects on the uterus during a protracted labor caused by irregular and feeble muscular contractions, but he attributes this effect to "its arousing the general nervous forces of the system." The articles on jaborandi and its alkaloid pilocarpin, salicylic acid, salicine, dialyzed iron, and thymol contain a very fair epitome of recent investigations. We regret that Professor Wood has not inserted in the text the proper doses expressed in metrical weights and measures, as well as those of the commonly used apothecaries' table. We believe none of the therapeutical text-books in English have as yet introduced this practice, while doubtless the use of the metric system would be greatly facilitated by such an innovation. This work bids fair to keep its position as the best text-book on the action of drugs.

¹ *Treatise of Skin Diseases*. With Formulæ for Students and Practitioners. By TILBURY FOX, M. D., etc., and T. C. FOX, M. B., etc. Second American edition, enlarged and revised by the authors. Philadelphia: Henry C. Lea. 1879.

² *Therapeutics, Materia Medica, and Toxicology*. By PROF. H. C. WOOD, JR., M. D. Third edition, revised and enlarged. Philadelphia: J. B. Lippincott & Co. 1879.

THE ADMISSION OF WOMEN TO HARVARD UNIVERSITY.

We called attention two weeks ago to the fact that the board of overseers had under discussion the question of accepting a bequest of ten thousand dollars, offered in case women were admitted to the medical department. Since that time the final meeting has been held, but previous to this it was thought expedient to call the medical faculty together for a formal expression of opinion. At this meeting of the faculty it was evident that there was a decided change of opinion since its previous vote, taken one year before. The debate terminated with the following resolution, carried by a vote of thirteen to five: "Whereas the medical faculty are now engaged in radically changing the plan of study in the school, an undertaking which will require several years for its completion, and will demand all the time and ability of the teachers which are available for the purpose, we deem it detrimental to the interests of the school to enter upon the experiment of admitting female students." It was also "Resolved that it is not advisable to open the course of study at the medical school to women" by a vote of fourteen to four. One member who was obliged to leave during the discussion would have voted with the majority in each case. Under these circumstances it was but natural that the overseers at their meeting, held a few days subsequently, resolved "That the overseers find themselves unable to advise the president and Fellows to accept the generous proposal of Miss Hovey" by a vote of seventeen to seven. In view of this it is somewhat surprising that the president, who, it will be remembered, was one of those who signed the majority report of the committee favoring the admission of women, quietly introduced the following proposition at the end of the meeting, after a long discussion on the main question and without previous notice: "That in the opinion of the board of overseers it is expedient that under suitable restrictions women be instructed in medicine by Harvard University in its medical school." This question was put without previous debate, and passed by a vote of sixteen to ten, several members, not having, we are informed, appreciated its inconsistency or its attitude of opposition to the very clearly expressed views of the faculty. If the second resolution is to be considered a fair expression of opinion of the board of overseers, which we do not think to be the case, Harvard is so far on record as favoring the coeducation of the sexes.

The main argument upon which the little band of persistent and energetic ladies relied who favor the education of women at the university, and under whose influence its present head seems to have become an advocate of the cause, was the total lack of means to obtain a proper medical education in this country. This was their strong point, and so far as the majority report shows we find no evidence that such opportunities exist. A glance, however, at the catalogues of medical schools for women in this country, and some of the opinions of prominent men in the principal cities upon the advantages of such schools, gives quite a different picture from that presented to the overseers.

The Tenth Annual Catalogue of the Women's Medical College of the New York Infirmary for 1878-79 shows a prosperous condition of that school. A

graduated course of three years' study is provided, to which preliminary examinations or diplomas are required for admission. Yearly and final examinations for a degree are held by the faculty, after which candidates are required to go before a board of examiners, consisting of some of the most eminent professors of the medical schools of New York. The best clinical facilities are within reach. The medical class for 1877-78 contained forty-seven students. Among the names on the list are those of six students from Massachusetts. At the commencement, May 22, 1879, ten graduates were examined and pronounced well qualified by the board of examiners. Members of the board regard the standard of excellence at the examinations as good as that at the best colleges.

The Twenty-Ninth Annual Announcement of the Women's Medical College of Pennsylvania for 1878-79 gives a favorable account of the condition of that institution. This school is established on a permanent basis, having an endowment fund. It has a progressive course of three years' study, and careful examinations for a degree. It has excellent clinical advantages, particularly at the Women's Hospital, where over four thousand patients are treated annually, and instruction is given daily by the resident physician, Dr. Anna E. Broomall. The class for 1879 has ninety students. Twenty graduates received their degrees this year, and the quality of the students is represented as better every year.

The Ninth Annual Announcement of the Woman's Hospital Medical College, of Chicago, represents the faculty of that school as "desirous to give every possible encouragement to the growing tendency toward a higher medical education." It requires a preliminary examination or diploma for admission, a course of three years' study, and a final examination for a degree. It has a "new college building admirably adapted to its wants." It has extensive clinical advantages and abundant material for the study of practical anatomy in the dissecting-room. The medical class for 1877-78 consisted of thirty-two students. The number of graduates of the class of 1878 is seven.

Incidental replies to letters of inquiry from leading physicians in New York and Philadelphia develop the fact that while the schools for women there are looked upon with great favor, the universal opinion of the profession, so far as it has been expressed, is decidedly and strongly against the coeducation of the sexes in medicine.

From this testimony it is evident that abundant opportunity for a good medical education of women does exist in this country.

We are informed that in a recent number of the *Cochische Zeitung* it is stated that the university at Zurich has decided no longer to admit women, because the experiment had proved a failure, and had led to evil moral results. Syracuse University has, we understand, also had a somewhat similar experience.

It can hardly be possible that such evidence as this has been wholly overlooked. How are we to interpret, then, the unwillingness of the female sympathizers to found a separate school, which, with one half the energy now displayed, and the moneyed interest to back it, could easily have been accom-

plished? Clearly this movement is intended as the thin end of the wedge which is to open the entire university to women. The vigorous rally of the faculty at the eleventh hour was not sufficient to counteract the influences which in plausible disguise were quietly exerting their full strength. Had this body from the outset given in a decided manner the weight of its opinion against the question, and presented an impenetrable front, no weak point of attack would have presented itself. But some of its members chose at first, for reasons best known to themselves, to assume an ambiguous attitude. Into this crevice the wedge was dexterously inserted, and the woman party, well satisfied with their success, will drive it home at the first favorable opportunity.

We trust there will be a vigorous protest from the alumni at their annual meeting against this "new departure," and that they will make their influence felt in the coming election of overseers.

MEDICAL NOTES.

—The Warren Triennial Prize of four hundred dollars will be awarded next year to the best work on Original Observations in Physiology, Surgery, or Pathological Anatomy. Essays should be forwarded to the resident physician of the Massachusetts General Hospital on or before February 1, 1880. The large sum offered for competition by this prize fund brought out an unusual number of valuable essays in 1877.

—Dr. Adolph Gubler, professor of therapeutics in the medical school of Paris, died on April 18th, in the fifty-eighth year of his age. He was born in Metz, April 4, 1821. He was the president of the International Medical Congress held in Paris last year, and was one of the editors of the new *Revue d'Hygiène*.

—Dr. A. Reeves Jackson, late of the Woman's Hospital of the State of Illinois, announces the opening of a new private hospital for the treatment of diseases of women.

NEW YORK.

—On the 28th of May the schooner Mary A. Whitlaw arrived in New York harbor from Miragoane with yellow fever on board. She sailed on the 6th, and during the voyage lost three seamen from the disease, one dying on the 10th, another on the 12th, and a third on the 20th. The brig Eva M. Johnson, which sailed from the same port on the 29th of April, and arrived on the 29th of May, also lost her master from yellow fever during the voyage.

—Kleptomania is not ordinarily set down in the books as one of the effects produced by the taking of opium, but a Chinaman who has just been committed in the Tombs police court for trial on a charge of stealing an umbrella from a store on Broadway assigned the cause of the theft to the fact that he was under the influence of that drug at the time.

WASHINGTON.

—The bill for the prevention of epidemic diseases has finally passed both houses of Congress, with certain modifications. A substitute for senate bill

108 was reported by the committee to the senate, which underwent considerable discussion on May 22d and 23d. The bill was in substance the same as that for which it was offered as a substitute, being modified mainly in the third section.—other sections being so worded as to correspond with the same,—which third section in the first bill provided for the making of necessary rules and regulations by the National Board of Health under the authority of the government of the United States, and for their enforcement by that authority; the substitute recognizing and aiding the enforcement of such rules and regulations of state boards as tend to prevent the introduction of contagion from foreign countries and from one State into another; but further, that where there are none such, or where they are insufficient, the board shall report such facts to the president, and he shall in his judgment require the board to make such proper rules and regulations, to be enforced by the state authorities, or, in case of their failure or refusal so to enforce them, the president is to provide for their proper enforcement. The sections having reference to diseases of cattle have been stricken from the bill, and in consequence the appropriation asked for is reduced to \$500,000. The discussion on the bill led to the further modification that the penalties named should not be inflicted until the provisions of the bill had been officially promulgated for at least ten days in the port from which the vessel sailed, and the expression in the first section of “vessels engaged in the transportation of goods or persons” was altered to read simply “any merchant ship or vessel.” Some discussion arose as to what constituted contagious and infectious diseases, and the honorable senators were not quite clear as to the distinction between typhus and typhoid fevers; an attempt was made to define and limit the application of the expression contagious and infectious diseases, but failed. The next important item considered was the question of expenditures, which resulted in the passage of an amendment making all such to be disbursed under the direction of the secretary of the treasury, and further that the act should not continue in force for a longer period than four years. In the house the amended senate bill was passed without further amendment. Mr. Young, as the chairman of the committee introducing it, asked that in consideration of its importance and the necessity for avoiding further delay it be passed as “a measure of compromise, not commanding the entire approval of every member of the committee in all its features,” thinking it better to “wait until the regular session to make such changes and alterations as experience may show to be necessary.” After considerable discussion and the passage of the bill, Mr. Young moved to reconsider the vote by which the bill was passed, and also moved that the motion to reconsider be laid on the table, which was agreed to.

—Senate bill 206, relating to the transportation of animals, has called forth a very interesting debate in the senate, with valuable information and data concerning the great defects in live-stock transportation and the consequent injurious quality of the meat, to say nothing of the cruelties practiced unnecessarily. Without coming to any definite conclusion, however, on May 27th the further consideration of the bill was postponed until the first Monday in December next.

BOSTON CITY HOSPITAL.

SURGICAL CASES OF DR. WILLIAM INGALLS.

[REPORTED BY S. B. WOODWARD, M. D.]

CASE I. *Crushed Foot; Syme's Amputation; Repeated Hemorrhages; Ligature of Anterior Tibial; Amputation below Knee; Recovery.*—July 7, 1878, M. L., laborer, aged thirty-two, had his right foot severely crushed by the cars, while intoxicated. He was at once brought to the hospital, where the injured foot was removed by Dr. Ingalls near the ankle-joint (Syme's operation). Lister method followed in all its details, and stump dressed with Lister gauze. Hemorrhage profuse. Numerous vessels tied with carbolized catgut. Continuous oozing for the next two days, the dressings being changed twice daily in consequence. On the fourth day delirium tremens was developed, and the patient tore off the Lister gauze. Delirium proved to be of a mild type, however, and lasted but two days. The stump was now dressed with a carbolized compress, and for a week everything went on well, the edges of the flaps uniting by first intention, all sutures being removed on the seventh day. On the 18th of July, eleven days after the injury, a brisk arterial hemorrhage took place, the blood coming from just under the edge of the upper flap. This was controlled by a pad over the lower part of the anterior tibial artery. Hemorrhage recurred the next day while the stump was being dressed, though the pad was still in position, and again with still greater violence, and from two places, on the evening of July 20th.

At this time Dr. Ingalls decided to tie the offending vessel, in the wound, and ether was given for that purpose, but suppuration had so extensively destroyed the coats of the arteries that this was found to be impossible. By a prolongation of the original incision, the anterior tibial was then with great difficulty reached and secured in the middle third. Extensive suppuration took place in the line of the incision, large sloughs formed, and capillary hemorrhages were continually occurring. A slight touch or jar, or even a sudden movement of the body, was often a sufficient cause for the latter, and during the next two weeks a solution of ammonio-ferric alum was several times used with good effect.

At midnight of the 29th a severe arterial hemorrhage took place. Patient pulseless, yawning, and pallid. Ligature in place and firm; bleeding point above it. Several slight attacks occurred during the next two days, and August 1st there were two severe hemorrhages, controlled only by long-continued pressure by femoral tourniquet. Two hours after the last of these Dr. Balles (then on duty) amputated the leg in the upper third. The Esmarch bandage and rubber tourniquet were used, and but little blood lost. Extraordinary vascularity of the parts, over twenty vessels, most of them large, being tied with silk. Toward the close of the operation the patient had a hemorrhage from the lungs. There was sudden and severe collapse; his pulse reached 150, and his mouth filled several times with bright clotted blood. Ether was withdrawn, and the pulse rapidly falling, while respiration became more and more shallow, brandy and carbonate of ammonia were given subcutaneously. When the patient had partially rallied under this treatment, a sub-

cutaneous injection of ergotin was given, sutures were loosely run through the skin flaps which had been made; the stump was left open, and laid on a pillow. The patient was immediately removed to bed, heaters and blankets applied, and stimulating and nutritive enemata of brandy, laudanum, and milk given every two hours during the night. As he slowly rallied from the severe shock several bleeding points appeared and were secured.

The original intention of drawing together the edges of the flaps on the succeeding day was abandoned on account of continuous oozing, and the sutures were from day to day cut out, and the stump left to granulate. To combat the hamorrhagic tendency the granulating surface was syringed twice daily with a mild solution of the "ferric alum," and two drachms of fluid extract of ergot were given morning and night.

A severe hamorrhage took place on the 7th during the act of defecation, and for several weeks slighter ones were continually occurring from very trivial causes, the blood at these times coming from no distinct vessels, but pouring from nearly the whole surface of the stump.

The wound granulated slowly, the large surface gradually cicatrized, and although recovery was somewhat retarded by a slight exfoliation from the end of the tibia the patient was discharged, November 1st, in good condition and with his stump practically healed.

There was no history of antecedent hamorrhagic tendency in this case. During the four months patient had about twenty hamorrhages. For weeks he lay with scarcely power to raise his head from the bed, with no appetite, and almost afraid to sleep. He was so reduced that at the worst his blood was an almost colorless serum without the power of coagulation. A femoral tourniquet was kept constantly applied, and a watcher by his bed day and night. The rubber cord of Esmarch was at first used, but the old fashioned strap, pad, and screw were substituted, the patient learning to tighten them himself, which he often did before his watcher observed anything wrong. Lister dressings were dispensed with at the secondary amputation, because with the almost absolute certainty of subsequent hamorrhage it was thought neither desirable nor safe to have the stump covered up from sight.

CASE II. Compound Fracture of Leg; Resection of Fragments; Hamorrhage; Ligature of Anterior Tibial; Burrowing of Pus; Amputation at Knee; Death.—August 16, 1878, J. M., a German, aged twenty-two, of gross habit and a confirmed beer drinker, was kicked in the leg by a horse while driving him. He then either jumped or fell to the ground, bearing his whole weight on the injured limb. When brought to the hospital a wound admitting the little finger and extending to the bone existed on the outer side of the middle third of the right leg. Both the tibia and fibula were fractured transversely in this locality, with marked anterior riding of the upper fragment of the tibia, which pressed dangerously on the skin immediately below the compound opening. There was great swelling of the whole leg, which was emphysematous nearly to the knee. There was little hamorrhage. Shock marked. All efforts to "reduce the fracture," both with and without ether, having altered the position of the fragments but slightly, if at all, the air was pressed out of the leg, the wound sealed with compound tincture of benzoin, and the limb having been placed in a fracture box the patient was removed to

the ward. Marked constitutional symptoms appeared, and during the next three days the swelling and emphysema increased, both in amount and extent, while the compound opening became larger from the sloughing due to pressure of jagged fragments of bone on the skin. The wound was washed out with disinfectants, but it soon became evident that there was not sufficient drainage, and on the 19th, suppuration being by this time established, it was decided to make counter-openings.

Ether having been given, Dr. Bolles, assisted by Dr. Fifield, made a more thorough examination of the limb than had been previously possible, the original wound being enlarged for this purpose. The muscles were dissected up in every direction: the leg was distended by emphysema, and filled with pus and decomposed blood, and it was evident that vigorous measures could alone save the limb. On examination of the fracture it was seen that the upper end of the tibia was held in its unnatural position by the fractured portion of the fibula, which was pressed against it in the form of an arch, and which supported it so firmly that it could not be broken down. The end of the upper fragment of the tibia was denuded of its periosteum, and apparently dead. The ends of the broken fragments of the tibia were removed with the chain saw, and as it was still impossible to straighten the limb the fractured portion of the fibula was also resected. Four counter-openings were made on the anterior, external, and internal surfaces of the limb, horsehair drainage tubes inserted, and the leg placed in a Bolles fracture box. Stimulants were freely given, and the leg was washed out thoroughly twice daily with carbolic solution, one part to eighty. Pus continued to form in large amount, and the horsehair not proving satisfactory as an aid to drainage, rubber tubes were substituted on the 23d. On the 26th, during the morning dressing, there was a sudden and severe arterial hæmorrhage from deep down near the site of the fracture. After ineffectual attempts to check it by milder means a femoral tourniquet was applied, ether given, and the anterior tibial artery tied above and below. A pocket of pus over the outer malleolus was also opened, and an additional counter-opening made five inches higher up the leg. Very severe shock followed, lasting several days. During the next week the patient lost ground rapidly; the bones became more and more denuded of their periosteum, the tissues sloughed extensively near the seat of fracture, ulcerations appeared on the under surface of the limb, and in spite of the numerous openings pus burrowed further and further up the leg. Dr. Gay — then on duty — decided that amputation had become imperatively necessary, and September 6th the limb was removed at the knee-joint, with antiseptic precautions. Anterior and posterior flaps: the former of skin, three inches long; the latter of skin and muscle, four inches. Anterior flap made entirely of the wall of a suppurating cavity. Two drainage tubes (rubber) inserted between the flaps, one running well up into the cavity of the abscess. Flaps brought together without tension and united by sutures.

In the amputated leg was a large sinus extending from ankle-joint to patella with branches running in all directions. The bones were denuded of periosteum for several inches above and below the seat of fracture. There was a large abscess over the inner condyle of the femur, not communicating with the joint.

Leg redressed under spray on the succeeding day, on account of abundant purulent discharge, and twice daily for the next two days for the same reason. Lister dressing omitted on the 11th, the anterior flap having sloughed, as well as part of the posterior, while everything was soaked with an excessively abundant and offensive discharge. The stump was now kept wet with a solution of chlorinated soda, the lower flap supported by plaster, and the leg laid on a bed of oakum. Syringing with carbolic solution twice a day was again ordered. Inflammation now attacked the cartilages over the condyles, sloughing and suppuration continued, and the patient had several chills. Involuntary dejections appeared on the 15th, and, becoming rapidly weaker, the patient died of exhaustion on the morning of the 20th, five weeks after the receipt of the injury.

LETTER FROM ST. LOUIS.

Abscess of the Liver ; Aspiration. — Prostitution.

MR. EDITOR:— Our City Hospital is giving us quite an opportunity for studying the treatment of cavities containing pus by aspiration. Since February 26, 1876, there have been in that institution nine cases of abscess of the liver, in which aspiration has been practiced, besides several cases of psoas and lumbar abscess and empyema. At present there is in the hospital a patient from whose pleural cavity twenty-eight ounces of pus were drawn at the second aspiration, and also a case of hepatic abscess, in which, at the second aspiration, eighty ounces of pus were drawn.

In regard to the cases of hepatitis, it may be of some interest to note that during the past two years twenty-one cases have been treated, of which notes are at hand. Twelve of these were not aspirated, and probably included those which were supposed to be the milder cases. One of these was opened by cauterization, and resulted in death. Two, at their own request, were discharged from the hospital: one unimproved, and the other in such a condition that recovery seemed impossible. The remainder of the twelve were all fatal, giving ten deaths out of ten cases where aspiration was not practiced, and where the result is known. There is a thirteenth recorded case discharged recovered; but the notes are not sufficient to confirm the diagnosis. Of the nine in which aspiration was used, two recovered, and one is still in the hospital doing very well. Thus, out of eight cases where aspiration was used and the result is known, two, or twenty-five per cent., recovered. After the abscesses have been evacuated drainage tubes are inserted, and the cavities are frequently washed out with weak solutions of chloral or carbolic acid. Upon one patient the aspirator was used five times, and upon both those who recovered it was used three times. Some of these hospital cases, together with several from private practice, formed the subject of an interesting article by Dr. P. G. Robinson, published in the *St. Louis Courier of Medicine* for January, 1879.

At the Female Hospital, suppurating buboes have also been treated by aspiration, the results being much better than when they were treated by the old methods. The *St. Louis Courier of Medicine* for April contains a paper

The patient was exceedingly nervous, and the womb very irritable. A happy thought was suggested by the sight of my laryngoscope standing near. Nott's speculum was inserted, the light from Tobold thrown into the vagina, the mirror adjusted, and the sponge seen and lifted with a pair of throat forceps from its situation at the internal os before the patient knew the manipulation had begun. Her caustic remark, "Why did n't you do that at first?" could not destroy the pleasure I felt at the acquisition of a method of illumination that I have since used successfully in many cases of diseased uteri. The largest (one inch to two inches) mirrors are the best, and they may be used with any speculum.

REPORTED MORTALITY FOR THE WEEK ENDING MAY 24, 1879.

Cities.	Population estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from				
				The Principal "Zymotic" Diseases.	Pneumonia.	Scarlet Fever.	Diphtheria and Croup.	Diarrhoeal Diseases.
New York.....	1,085,000	444	21.34	17.79	12.39	6.98	3.83	4.05
Philadelphia.....	—	294	—	9.47	—	1.89	1.89	1.13
Brooklyn.....	564,400	144	13.30	19.44	10.41	5.55	7.64	1.33
Chicago.....	—	122	—	18.85	4.10	4.10	7.38	2.46
St. Louis.....	—	76	—	6.53	11.84	1.32	—	2.63
Baltimore.....	365,000	109	15.57	16.51	1.83	6.42	5.51	.92
Boston.....	360,000	110	15.93	12.72	8.18	1.82	2.73	3.64
Cincinnati.....	—	80	—	17.50	10.00	15.00	—	—
District of Columbia...	160,000	57	18.53	15.80	14.04	8.77	—	1.75
Cleveland.....	—	50	—	23.00	12.00	6.00	6.00	2.00
Pittsburgh.....	—	44	—	15.91	13.64	—	9.09	—
Buffalo.....	—	37	—	45.95	5.41	16.22	16.22	—
Milwaukee.....	—	23	—	13.04	4.35	—	8.70	4.35
Providence.....	101,000	30	15.49	26.67	3.33	10.00	3.33	3.33
New Haven.....	60,000	15	13.04	13.33	—	—	—	—
Charleston.....	57,000	28	25.61	8.57	3.57	—	—	—
Nashville.....	27,000	7	13.52	28.57	14.23	—	—	14.23
Lowell.....	53,300	9	8.80	—	22.22	—	—	—
Worcester.....	52,500	25	24.83	20.00	4.00	—	16.00	4.00
Cambridge.....	51,400	12	12.17	8.33	—	—	8.33	—
Fall River.....	48,500	19	20.43	5.26	15.79	—	5.26	—
Lawrence.....	38,200	10	13.65	—	—	—	—	—
Lynn.....	34,000	8	12.27	25.00	—	—	25.00	—
Springfield.....	31,500	8	13.24	37.50	—	—	12.50	—
New Bedford.....	29,000	15	28.97	13.33	6.67	—	6.67	—
Salem.....	26,400	10	19.75	20.00	20.00	—	20.00	—
Somerville.....	23,350	8	17.86	—	—	—	—	—
Chelsea.....	20,800	11	27.53	9.09	—	—	9.09	—
Taunton.....	20,300	4	10.32	—	25.00	—	—	—
Holyoke.....	18,200	7	20.06	42.86	—	28.57	14.29	—
Gloster.....	17,100	6	18.20	—	—	—	—	—
Newton.....	17,100	—	—	—	—	—	—	—
Haverhill.....	15,300	6	26.45	—	—	—	—	—
Newburyport.....	13,500	4	15.45	—	25.00	—	—	—
Fitchburg.....	12,500	4	16.68	25.00	—	—	—	—

¹ Not reported.

Eighteen hundred and six deaths are reported: 291 from the principal "zymotic" diseases, 251 from consumption, 140 from pneumonia, 90 from scarlet fever, 81 from diphtheria and croup, 39 from diarrhoeal diseases, 30 from bronchitis, 21 from whooping-cough, 20 from typhoid fever, 12 from erysipelas, 10 from cerebro-spinal meningitis, six from measles, three from remittent fever, two from pleurisy, one each from congestive, intermittent, malarial, and typhus fever, none from smallpox; indicating an increase in cerebro-spinal meningitis, a decrease in the total mortality from measles, pulmonary diseases, erysipelas, whooping-cough, and the "zymotics" as a whole; while diarrhoeal diseases, typhoid fever, diphtheria and croup, and scarlet fever remain without essential change. From *bronchitis*, 16 deaths were reported in New York, five in Brooklyn, one in Chicago, Boston, District of Columbia, Pittsburgh, Milwaukee, New Haven, Cambridge, Fall River, and New Bedford. From *whooping-cough*, five in New York, four in Brooklyn, two in Cincinnati, Cleveland, and Springfield, one in Chicago, Baltimore, Boston, Pittsburgh, Providence, and New Haven. From *typhoid fever*, six in Philadelphia, two in Chicago, Boston, Pittsburgh, and Providence, one in New York, Brooklyn, St. Louis, District of Columbia, Buffalo, and New Haven.

From *cerebro-spinal meningitis*, five in Philadelphia, two in Chicago and Buffalo, one in New York, Baltimore, Boston, Worcester, and New Bedford. From *erysipelas*, four in New York; two in Cleveland and Pittsburgh, one in Philadelphia, St. Louis, Baltimore and Boston. From *measles*, two in New York, District of Columbia, and Cleveland. From *remittent, intermittent, congestive, and malarial fevers*, two in Brooklyn, one in Baltimore, Chicago, Charleston, and Nashville. From *typhus fever*, one in Cleveland. The Southern cities remain quite free from indications of yellow fever, no authentic cases having been reported. In eighteen of the nineteen cities of Massachusetts, the mortality from diphtheria was much greater than for the previous week; from pneumonia and typhoid fever it was much less.

The weather was reported fair, cool, and changeable (on the lakes), the meteorological record for the week in Boston (latitude 42° 21', longitude 71° 4') being as follows:—

Date.	Barom-eter.		Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.			Rainfall.	
	Mean.		Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in Inches.
May 13	30.076		67	76	61	94	79	79	84	W	SE	SW	2	4	11	O	F	C	—	—
" 19	29.990		62	66	55	94	100	75	90	S	E	E	2	3	1	O	F	R	—	.66
" 20	29.895		57	76	61	94	88	80	101	S	E	E	4	7	10	O	F	F	—	—
" 21	29.775		58	86	56	92	50	45	62	SW	SW	N	12	13	18	O	F	F	—	.97
" 22	30.138		54	60	39	46	66	60	57	N	E	O	12	12	0	C	C	C	—	—
" 23	30.138		47	55	44	52	64	61	59	NE	NE	SW	10	20	4	C	C	C	—	—
" 24	30.138		50	58	42	55	58	45	53	W	E	S	11	12	0	C	F	F	—	—
Week.	30.076		59	68	42				71			SW	144						10.3	.73

O, overcast; C, clear; F, fair; R, fog; H, haze; R, rain; T, threatening.

For the week ending May 3d, in 149 German cities and towns, with an estimated population of 7,401,076, the death-rate was 27.1, an increase of 0.1 from the previous week, with a slightly greater mortality from scarlet fever, diarrhoeal diseases, and measles, while diphtheria has continued decreasing since April; whooping-cough, typhus fever, typhoid fever, and acute diseases of the respiratory organs, too, were less fatal. Three thousand eight hundred and fifty-six deaths were reported: 621 from pulmonary consumption, 484 from acute diseases of the respiratory organs, 204 from diarrhoeal diseases, 118 from diphtheria and croup, 60 from scarlet fever, 48 from typhoid fever, 47 from whooping-cough, 37 from measles, 18 from puerperal fever, six from typhus fever, one from small-pox. The death-rates ranged from 16.3 in Hanover to 43.6 in Munich.

For the week ending May 10th, in the 20 English cities having an estimated population of 7,383,999, the death-rate was 22.4, a decrease of 1.0 from the previous week, showing a decline in all the principal reported causes of death, which is especially marked in diphtheria, small-pox, diarrhoeal diseases, and pulmonary affections. Three thousand one hundred and sixty-eight deaths were reported: 392 from diseases of the respiratory organs, 122 from whooping-cough, 81 from measles, 79 from scarlet fever, 37 from fever, 29 from diarrhoea, 14 from diphtheria, five from small-pox (in London). The death-rates ranged from 12.9 in Norwich to 29.5 in Newcastle-upon-Tyne; London 22.8, Birmingham, 20.4, Liverpool 22.3, Manchester 24.8. In Edinburgh the death-rate was 18, in Glasgow 24, in Dublin 32.

Small-pox continues to prevail, with diminished fatality, in Calcutta, Bombay, London, St. Petersburg, Paris, Budapesth, Odessa, Barcelona, Geneva, and Warsaw, increased in Vienna and Dublin; in many districts of Poland it is increasing. No new cases of the plague have appeared; the investigations and discussions are still going on with reference to the origin of the epidemic. Quarantines have been reduced, as a rule, to restrictions on rags, articles of clothing, and bedding. Diphtheria continues to prevail in Vienna and the Italian cities; measles in Paris and Brussels; fevers in St. Petersburg and Astrachan; yellow fever in Havana and Port au Prince. Under the better regulations of the German government syphilis has decreased enormously in Alsace and Lorraine, and the reported enormous increase in insanity has been shown to be not such, but simply apparent.

NORFOLK DISTRICT MEDICAL SOCIETY.—The following officers for 1879-80 were chosen at the annual meeting, May 13, 1879: President, Dr. Robert Amory, of Brookline. Vice-President, Dr. William C. B. Fifield, of Dorchester. Secretary, Librarian, and Reporter, Dr. Clifton E. Wing, of Jamaica Plain. Treasurer, Dr. Norman Call, of Roxbury. Commissioner of Trials, Dr. T. H. Dearing, of Braintree. Nominating Councilor, Dr. D. D. Gilbert, of Dorchester. Committee of Supervision, Dr. J. B. Moran, of Roxbury, Dr. A. D. Kingsbury, of Needham. Councilors, Drs. W. S. Everett, of Hyde Park, A. R. Holmes, of Canton, A. D. Bacon, of Sharon, S. E. Stone, of Walpole, J. H. Gilbert, of Quincy, George W. Fay, of East Weymouth, D. S. Fogg, of Norwood, Robert T. Edes, of Roxbury, P. O'M. Edson, of Roxbury, J. S. Streeter, of Roxbury, D. D. Gilbert, of Dorchester, C. E. Stedman, of Dorchester, W. P. Bolles, of Dorchester, J. G. Flint, of Roxbury. Censors, Drs. J. W. Chase, of Dedham, O. F. Rogers, of Dorchester, G. K. Sabine, of Brookline, E. T. Williams, of Roxbury, Joel Seaverns, of Roxbury. A new code of by-laws was adopted.

NEW HAMPSHIRE MEDICAL SOCIETY.—The eighty-ninth annual meeting of the society will be held in Union Hall Opera House, Concord, on Tuesday and Wednesday, June 17th and 18th, at eleven o'clock, A. M. The following special railroad arrangement has been made: The Concord will sell tickets, to Concord and return, from Manchester, Nashua, Raymond, Epping, Newmarket Junction, Portsmouth, Derry, Hooksett, Suncook, Pittsfield, and Goffstown, at reduced prices. Members on the following lines will purchase tickets of the conductors for fare one way: Northern, Concord, and Claremont, Bristol, Connecticut Valley, and Boston, Concord, and Montreal. President's address at twelve o'clock. Oration by C. C. Odlin, M. D., Exeter. Medical Ethics, G. B. Twitchell, M. D., Keene. Practical Medicine, A. B. Hoyt, M. D., Grafton. Surgery, J. H. Wheeler, M. D., Dover. Physiology, C. W. Toiles, M. D., Claremont. Metric System, C. W. Manchester, M. D., Lebanon. Alcoholic Stimulants in Typhoid Fever, C. F. Kingsbury, M. D., Lyme. Differential Diagnosis, D. S. Adams, M. D., Manchester. Practical Use of Disinfectants, William Child, M. D., Bath. Medical History of Dover, J. R. Ham, M. D., Dover. The society will adjourn for the anniversary dinner at two o'clock, P. M. Programme for Wednesday. The society will meet in the hall at eight o'clock, A. M., and attend to the reports of standing committees, the election of officers, and the reading and discussion of any papers left over on Tuesday. (1.) Report of delegates to Dartmouth Medical College. (2.) Report of delegates to other state societies. (3.) Report of district societies, by the secretaries. Election of officers at nine o'clock. Treasurer's report. Report of cases and volunteer papers, with discussion of the same. The following are the officers of the society: President, A. F. Carr, M. D., Goffstown. Vice-president, T. J. W. Pray, M. D., Dover. Treasurer, L. B. How, M. D., Manchester. Secretary, G. P. Conn, M. D., Concord.

BOOKS AND PAMPHLETS RECEIVED.—Perincorraphy, with Special Reference to its Benefits in Slight Lacerations, and a Description of a New Mode of Operating. By Edward W. Jenks, M. D., Professor of Gynecology in the Chicago Medical College. (Reprint from the American Journal of Obstetrics.)

Neurological Contributions. By William A. Hammond, M. D., assisted by William J. Morton, M. D. New York: G. P. Putnam's Sons. 1879.

Premature Ossification of the Fœtal Cranium as a Cause of Dystocia and of Impairment of Intellect in Children. By John Ellis Blake, M. D. (Reprint from the American Journal of Obstetrics, April, 1879.)

The School Garden. Being a Practical Contribution to the Subject of Education. By Professor Erasmus Schwab, Director of the Military College of Vienna. Translated from the Fourth German Edition by Mrs. Horace Mann. New York: M. L. Holbrook & Co. 1879.

Pott's Disease: Its Pathology and Mechanical Treatment, with Remarks on Rotary Lateral Curvature. By Newton M. Shaffer, M. D. New York: G. P. Putnam's Sons. 1879.

American Health Primers. Hearing and how to Keep It. By Charles H. Burnett, M. D. Edited by W. W. Keen, M. D. Philadelphia: Lindsay and Blakiston. 1879.

Annual Report of the State Board of Health of Minnesota. January, 1879.

Yellow Fever. Its Origin and Relation to other Malarial Fevers. By J. G. Westmoreland, M. D. Atlanta, Georgia.

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AN ABSTRACT OF THE ANNUAL ADDRESS BEFORE THE MASSACHUSETTS MEDICAL SOCIETY.

BY GEORGE W. GARLAND, M. D.

“Many things remain to be done.”

MR. PRESIDENT, FELLOWS, AND GENTLEMEN, — The research and investigations of the medical men of Massachusetts, together with the deliberations of the Massachusetts Medical Society, as reported at its anniversary meetings, have not only been of great importance to the medical profession of this country, but their character has been such that they have attracted the attention of medical men and medical societies of other lands. No State among the communities of the world should offer superior advantages for acquiring a medical education than Massachusetts, for no other State is better calculated by its geographical position and by its bracing climate for the production of a vigorous and intellectual race of men and women, and no other State has traditions that can more fully inspire to bravery and patriotism, as well as to research in art, science, and literature, than those possessed by Massachusetts.

To-day we are assembled to add another link to the bright chain which binds us to the past, and I take pleasure in stating that we look with entire confidence into the ever-turning face of the future. The leading men of the past have one by one gone to their rest, with duties done and destinies fulfilled, while others have been and are coming forward bearing the rich treasures of past experiences and discoveries, with continually increasing facilities for acquiring a knowledge of the science of medicine. We commit our trust to the willing hands of our young men, fully believing that a glorious future awaits them. With such a blaze of light as now illumines their pathway from the collateral sciences, and with an ample literature placed in their hands, what may we not expect of them !

In his excellent oration of one year ago Dr. Minot, after alluding to the activity and prosperity of this society at that time, and after speaking of the advances which have been made in medical education, especially in the last few years, said, “Much remains still to be done.” This sentence was penned by one who knew whereof he wrote, and was

then, and is now, not only true as regards the Harvard Medical School and this society, but true in all departments of our profession.

Innovations and discoveries in medicine and surgery are being made from year to year, and although much has been done during the year now closing I can say, with the same force of truth, Many things remain to be done. *Multa supersunt agenda* should be plainly written across the noble brow of this society, for so it will be in all coming time. The rising sun of our prosperity is high in the heavens, but is there no danger? There never was a greater untruth uttered than the saying, "When a man has got his name up he can lie in bed till noon." No; nothing but untiring industry will enable us to advance, or even to maintain the high position we now occupy. Let us, then, in the future as in the past place able and active men at the front and workers all along the line. The practice of medicine and surgery is a work which cannot be slighted with impunity; it is no truer that poverty overtakes laziness than that dullness and professional stupidity will meet detection. Nothing but faithful study and a daily application in practice of the lessons given us along the road of our advancing science will sustain us.

The future is hidden from mortal eyes, except as we may reason from the known to the unknown, and infer what is to be from what has been. From what is known and from what has been we can safely infer — yes, safely foretell — that the Harvard Medical School is to become one of the leading medical schools of the world, where the highest education can be secured, and that the Massachusetts Medical Society in all the future will occupy that proud position among the medical societies of the world which it has held for so many years; and yet there are many things which remain to be done, and, without any attempt at well-turned sentences, I desire to speak of a few things of the many which remain unfinished.

It is a matter for regret that this society has not long since taken steps to use its influence in securing the universal establishment of the metric system of weights and measure in this State, a subject which has been repeatedly brought to its notice. This is not the time or place for the discussion of this important subject, which is already so well understood by quite a large number of our members, and most approved by those who have made it a study, but you will permit me to say it should be made a matter of interest to each one of us, one which our old habits of thinking shall not debar us from investigating individually, so that the entire weight of this influential body may be thrown in the right direction and in its favor.

If the dignity of a man's character adds weight to his words, how great must be the weight of this society on all matters upon which it may decide to exert its influence! Could all of its members be gov-

erned and guided by one motive, strict professional fellowship, by one object, medical improvement, — each and all moved by that high sense of honor and integrity which governs the good and great, for whom ethical codes are unnecessary, — no earthly power nor all the powers of darkness could for one moment stand in the way of perpetual advancement; but we regret that our councilors have felt the necessity of a code of ethics for this society. It is to be hoped that if we are to be governed by a written law of our own, it will be as brief as it may be, yet broad enough in its provisions to embrace all the relations of medical men in the State to each other, — the relations between all general and regular practitioners and specialists of all classes, together with all surgeons and physicians of state and city hospitals designed for general and special practice. It is well understood by members of this society that matters have not always run smoothly between country practitioners and city physicians and surgeons. Patients are flocking to the city of Boston and the smaller cities of the commonwealth for medical, surgical, and special treatment, and while it is impossible that no disagreement of opinion should occur, still neither distance nor position should grant the least license in word or expression, to or before a patient, which would have a tendency to injure the reputation of the family physician; and it should be remembered that the opinion and treatment of a former attendant are often willfully or ignorantly misrepresented. The members of the Massachusetts Medical Society should aid the medical institutions of the State, and encourage special study and practice, which have done so much in advancing medical science, and in turn receive that patient courtesy which is their due.

I refer with pleasure to the great work carried on by members of this society and others in the broad field of sanitary and hygienic study. Men are searching for all the means within the reach of art and science for the prevention of disease and the preservation of health. This field is unbounded and ripe for the harvest, and although the laborers are not few there is a great work yet to be done. No department of sanitary work is finished; even here at home, in Massachusetts and New England, protection is insufficient and incomplete. As vegetation can be found in all latitudes and altitudes, from the sea-weed to the lichen upon the mountain top, sending forth their exhalations, so endemic and epidemic influences, by whatever name they are known, from the yellow scourge of the South to the influenza of the North, are met in various degrees of severity, largely if not wholly dependent on local causes. As a single tub of stagnant water can satisfactorily stock a country village with mosquitoes, so a neglected sewer or drain will furnish a supply of filth fever for an entire neighborhood; and as the thistle-down lifts its ripe seed from the receptacle and bears it through the air to curse other soils, so the atmosphere lifts chemical poisons and

the germs of disease from beds of filth and pollution, diffusing them in endless variety through the different strata of air, changing too often the breath of life to the breath of death. Where the germ springs to life sanitary work, to be successful, must also begin. Turn the tub upside down, stamp out the thistle-bed of infection, and the work is done; all other efforts are only beating the air.

It gives me true pleasure to-day to mention the really wonderful and cheering success the recent change in medical instruction at the Harvard Medical School has produced, and I refer to it at this time to say that we can congratulate ourselves as well as the school on the advantages to us from the "new departure." The work of all medical societies and medical journals is, in fact, or should be, a continuation of medical instruction. This we have enjoyed in a larger degree during the last few years than ever before. The papers read before us and very much of the published matters in the Boston Medical and Surgical Journal have been as instructive to medical men as the Harvard lectures and demonstrations, or those of any other school, have been to students, and the articles published on recent discoveries and on the progress of the several branches of medical science have been of infinite value to their constant readers, each department being really worth the annual price of the JOURNAL; and I would earnestly recommend the members of this society who have not availed themselves of its instruction not to withhold what is due to themselves as well as to the JOURNAL.

Now that this society, the Harvard Medical School, and the Boston JOURNAL are in a more prosperous and satisfactory condition than ever before, it seems to me it is a favorable time for the Harvard faculty and each and every member of the Massachusetts Medical Society to further consider the absence of accommodations at North Grove Street for this society. The school has outgrown its building by its increase of members and demands, and the society is at that age and condition which should require a home of its own. We are excluded from the Lowell Institute, a hall dear to Boston, whose walls have echoed to the voice of eloquence from poets, sages, and patriots. It was a landmark in the history of Massachusetts, but it was not well suited to the wants and tastes of this society, and it has occurred to me that when the desired and needed change is made, — and made it will be, — and a building adapted to the wants of the school is constructed, a hall sufficiently large to seat this society might be built over the several rooms for the use of the school on special occasions, and for the annual and semi-annual use of the Massachusetts Medical Society, the bright, cheerful walls of which might be graced by objects which would remind us of the fact that we are members of a profession of more consequence than any other to the well-being of humanity; a place we could call our own with feelings of gratification and occupy with enjoyment; and

when medical gentlemen from other States and from other countries visit us they could be comfortably seated. When Harvard University shall erect a building such as it needs for its own use, this society will put its hand down deep enough into its pocket to crown it with a hall, designed by its own taste and wants. Now, gentlemen, this is not that form of charity which requires us to cast our bread upon the waters and to await a reward, but it is like dropping a quarter into the hand of a faithful waiter, whose return brings you a full plate. "The liberal soul shall be made fat" is the word of wisdom. No earnest attempt has ever been made by the Harvard faculty or by this society to make an improvement or to accomplish an end in which they have been unsuccessful. A few years ago we were in debt; by a well-directed effort we are now in funds. *Persistent effort* is all that is needed. See what has been done here in Boston recently by a few energetic young men in securing a medical library, and a building to shelter and protect it with its auditorium, and before unknown and unheard-of conveniences! No fiat went forth, but it sprang up a sort of first-fruit of energy, — a fruit that takes its nourishment from manly zeal and manly enterprise. "Go thou and do likewise." If the improvements or changes spoken of are needed or desirable, why not make them? It is our fault that we have not a hall of our own, and that we are dependent while we possess the means of independence.

The members of the Massachusetts Medical Society have been asked by the joint committee of the corporation and overseers of Harvard College to give their opinion on the question of admitting women to the medical school. I presume the committee has in keeping our several replies to the questions asked, and nothing I can say will be of the slightest value or weight at this time; but I may be permitted to mention in explanation of my own answer that my opinion is that if women are to be admitted to medical schools, and are to be recognized as physicians, there can be no more impropriety or objection to co-education than there is in co-practice or co-consultation in all classes of cases and diseases subsequent to graduation. In my judgment, if the same qualifications for admission are required as well as for graduation, and are strictly adhered to in all cases, there can be no valid, no earthly reason for excluding a human being, whether male or female, white or black, from a medical school or from this society. After the Harvard school has done its duty, its whole duty, to a student, and has conferred a diploma upon that student, this society should receive him or her with open arms, and not *till* then, and should aid each one as a parent would a child. Just here I wish to say a word. As the faculty of the school are considering the question of an increase of the term of study, and of requiring higher qualifications for admission, it should be kept in mind that no man lives who, after graduation and one year of practice, has felt that his prelim-

inary education was needlessly good, or that his medical preparation was too prolonged or too carefully attended to. It should also be remembered how many of us have had a life-long regret that our early education was so neglected, and that our medical studies were so desultory and without exactness as to be of little use to us in commencing practice.

It is well known to those who have been requested to read papers during the first day of our annual meetings that they have spoken to thin houses. Not a baker's dozen of the four hundred regular physicians of Boston come in here to listen to those who have occupied their spare time for months, it may be, in searching up the literature of certain diseases and conditions, and have come up here prepared to discuss matters of vital importance to the profession. This meeting is never full until just before dinner, as if the good things to eat are the all in all which bring us together. This is wrong; common courtesy, if nothing more, dictates a different course toward these gentlemen who, at great pains, are yearly preparing papers for this society. These papers have been productive of good, and if they are to be continued hereafter, as we hope they will, let the authors have a full attendance to cheer them on.

Twenty-five years ago to-day the number of members of this society who graduated before 1840 was quite large, composed of hale, vigorous-looking men. One year ago to-day, when those who graduated before 1840 were requested to pass over the rostrum and into the Music Hall, I with a few other stooping, gray-haired men responded, and my seat was within three of the head of the table. Then and there I was more than ever before impressed with the serious truth that we are all rapidly passing away. Twenty-five years from to-day will there be one left of that diminishing number? This is our day, and it behooves us to ask ourselves here and now, Are we doing all we can? Have we been and are we true to ourselves? Have we been true to those who have placed their lives in our hands? Have we been and are we true to the Creator of heaven and earth and the Giver of life? Are we doing all we can to advance our noble science? Whatever may be the record of the past, let us henceforth do all we can to improve those high moral and intellectual faculties with which an all-wise Providence, who seeth not as man seeth, hath endowed us.

CONTAGIOUS PLEURO-PNEUMONIA, OR LUNG PLAGUE.

BY ROBERT WHITE, M. D.,

Assistant Surgeon United States Marine Hospital Service.

THE prevalence of contagious pleuro-pneumonia among cattle at different points in the Middle Atlantic States at the present time, and the danger of its extension by the natural course of the cattle traffic to districts that are now free from it, afford sufficient reason for directing the attention of physicians to the great injury that may result to the interests of agricultural communities from its spread, and for indicating the prominent characteristics by which the disease can be recognized, and the means that may be adopted for its restriction. Scientific veterinary medicine has received so little encouragement in this country, and so few individuals have been properly trained in this specialty, that the services of a qualified veterinary surgeon cannot be readily obtained in the smaller towns and villages, where the disease is most likely to show itself under circumstances favoring its spread; and it seems proper that physicians practicing in such districts should familiarize themselves with the subject to an extent sufficient to enable them to give such advice and direction as may save their communities from great financial loss, and prevent, possibly, the ruin and distress of many families. So far from the observation and study of disease in animals detracting in any way from the dignity of the medical calling, it is presumed that every physician of liberal training will recognize how greatly such observations have contributed in the past, and will probably contribute in the future, to the progress of medical science, especially in relation to the essential characteristics of the contagious principle in many affections, and the manner in which disease is communicated from one individual to another. Of the various names by which this disease has been designated, *pulmonary murrain*, *contagious pleuro-pneumonia*, and *lung plague* are those which are best known in this country. The term epidemic or epizootic is frequently applied in this connection, but is objectionable, as it tends to suggest to the popular mind some determining influence in the atmosphere as the cause of the affection, and diverts attention from its true infectious character. As the contagious disease is often confounded with sporadic, non-contagious affections of the chest, I agree with Professor Gamgee in his preference for the term "lung plague" as the most distinctive, although contagious pleuro-pneumonia is most clearly indicative of the prevailing pathological condition. The disease is indigenous in Asia and the steppes of Eastern Russia, and first appeared in Europe, into which it was introduced through the latter country, at the end of the seventeenth century, and during the succeeding hundred years it gradually spread westward, until at the beginning of the present century outbreaks were occurring every few years over

all parts of the continent. As the disease was extinguished in one place it would reappear in another, owing to the movements of cattle in trade. It was imported into the British Isles from Holland in 1840, and committed great ravages there, the average loss from destruction of cattle for many years being from ten to twenty millions of dollars. From Great Britain the disease was introduced into this country by various importations of cattle. Between 1843 and 1850 slight outbreaks occurred in the vicinity of New York and Brooklyn, which have been so frequently renewed as to warrant the belief that the disease has never been wholly extinguished there. It has appeared at different points along the Northern Atlantic States, but its most serious manifestation was at Belmont, Mass., 1859, where three cows imported from Holland died a few days after their arrival, and the disease extended to the other animals on the estate. A calf purchased from this farm showed signs of illness on its way to Brookfield, fifty miles distant; it was placed in a barn with fifty head of previously healthy stock, most of which sickened in succession, and a large number died. The disease spread from farm to farm, as animals were interchanged in trade, the numerous deaths of cattle threatening financial ruin to many farmers, and the true character of the affection and the immense damage threatened to the agricultural interests of the State were soon recognized. The state authorities took prompt action by convening the legislature in special session, securing the necessary appropriations, and appointing commissioners with power to kill cattle actually diseased, as well as those that had been exposed to contagion and were suspected, the owners being compensated in part. Arrangements were made for the isolation and quarantining of diseased or suspected animals; the sale or the transportation of any cattle from the infected to the healthy districts, without permission of the commissioners, was made punishable by fine and imprisonment. In spite of these energetic measures the disease was not completely exterminated in the State until after a hard seven-years' fight and the slaughter of some twelve hundred cattle, in addition to those which died of the disease. The history of the Massachusetts outbreak illustrates the advantage of prompt coöperative measures for preventing the disastrous consequences that are likely to ensue from failure to recognize the disease in its early prevalence. In treating of the lung plague it is well to insist upon the recognition of the essential fact that it is a specific contagious affection, which does not arise spontaneously, as was long supposed, from any combination of influences, like overcrowding, bad or swill feeding, exposure to severe weather, etc., and that wherever the disease has prevailed in Europe or America it has been introduced by some animal suffering from the specific affection. Its contagious character has been amply demonstrated not only by the difficulty of checking the disease when it has once gained a foot-hold

among cattle, but by the experiments that have been made under the direction of the Swiss and French governments, where diseased animals were introduced among others, notably healthy, in districts where the affection had never prevailed, with the result of communicating it to nearly all the animals exposed. The greater portion of those which survived the disease were not again susceptible on repetition of the exposure. These observations also demonstrated that the contagion could be communicated by the clothes worn by the attendants or the blankets used for the animals, by the vessels and troughs from which they took their water and food, by the excretions, and by contact with the flesh of cattle that had died of the disease, and that these various substances retained the power of infection for many months. The pathological features exhibited by the disease are those of a specific and contagious general affection of a low typhus character, with special manifestations in the lungs, where extensive inflammation, with an excessive exudation into the pleural cavity, into the bronchi, and directly into the lung substance itself, occurs, — conditions which may proceed to such an extent as directly to destroy life by interfering with respiration, or may be succeeded by disorganization, formation of abscesses, gangrene, and more or less complete destruction of the lung tissue, accompanied by purulent infection and blood poisoning. The morbid anatomy of the disease bears considerable resemblance to that of acute phthisis in the human subject; but in many of its features the lung plague has a pathological analogy with small-pox, as it is eminently contagious, may be reproduced in other animals by inoculation with the exuded matter, when it causes a modified disease which secures immunity from its recurrence for a time, as does also an attack of the original affection. The special manifestations of this disease are displayed in the lungs, and the exudation into those organs contains the contagious principle, just as in small-pox the same conditions are manifested on the skin. The period of incubation attending the development of this affection is not well marked, as it may extend from one week to three or four months; and even after this long incubative stage only a latent form of the affection, with but few characteristic symptoms, may be developed. The cattle which conveyed the disease from England to Australia were three months on the voyage, and had no symptoms of the affection until landed, but there was no doubt that the infection of the animals had occurred before their departure from England. These insidious characteristics, which frequently mask its existence, add greatly to the difficulties connected with the disease. Many animals die during the first or second week, in the suffocative stage of the disease. If this period be survived, life may be prolonged five or six weeks. In the cases where recovery takes place the affected animal is capable of communicating the disease to exposed healthy cattle during the whole period

of convalescence. The disease varies greatly in intensity and in its rate of mortality. Animals on one farm may exhibit a mortality of seventy-five per cent., while on one adjoining nearly all may be sick, and but few die. The average death-rate is about forty per cent. of those affected. The observation of a few cases of the lung plague will enable any one with a medical training and a correct knowledge of the pathology of the affection to recognize its appearance among cattle. In a herd where the disease has gained a foot-hold, among the first symptoms shown by the affected animals will be the listlessness and irregularity of appetite and of rumination, distinguishing them from their healthy fellows, who are steadily browsing around them; and it has been noted as a curious fact that, despite the failure of appetite, the sick animals have a fuller appearance than natural. Another early symptom is the change occurring in the animal's hide, which loses whatever softness or sleekness it may have possessed, and becomes rough, stiff, and staring, the hair tending to stand outright, and the whole coat assumes a marked scraggy character. Slight shiverings generally attend the development of the disease, and expert dairy-maids, in some of the districts of Europe where the plague has prevailed for a long time, recognize its existence at an early stage by the stiffness of the teats, the difficulty in milking, and the gradually lessening amount of the secretion. An irregular, slight cough, harsh and dry in character, but not painful, develops daily; it is attended by a short, regular moan or grunt, which accompanies each expiration, and forms one of the most constant and characteristic symptoms of the disease. Both symptoms are aggravated by movement, and if suspected cattle are forced into active motion the affected animals will generally give these signs. Pressure on intercostals causes wincing and signs of tenderness; the respirations are quickened, and very shallow in character. The urine is scanty and high colored, constipation exists, and the excrement discharged is unnaturally dry. Many cases of the disease undoubtedly do not proceed beyond the stage manifested by these symptoms, resolution of the affection taking place, the poison being eliminated before essential change in the lung is produced. Although the physical examination of the chest in cattle is much less satisfactory than in man, on account of the greater thickness of the chest wall, the interposition of the broad scapulae, and the restlessness of the animals interfering considerably with auscultation and percussion, yet it is of great value in the diagnosis of the disease, and for correct observation of its progress.

It does not require a veterinary expert to recognize another certain and constant symptom in connection with the development of the disease, — the elevation of the temperature of the body, which is increased from its normal standard, 100° – 101° , to 102° – 104° , and may rise to 106° . This increase of temperature is almost invariably marked, and the use of the

clinical thermometer by its insertion in the rectum or vagina of suspected animals furnishes us one of the most reliable diagnostic marks that we possess, and one that will often give indications of the existence of the disease before the appearance of any other symptoms. Animals in whom a temperature of more than 102° is recognized should be at once isolated and placed under observation. The flattened and motionless ribs on the affected side, the dullness on percussion, and the presence of the healthy respiratory murmur in a normal lung, or its absence in the consolidated organ, where it may be replaced by the râles produced by the varying conditions of the inflamed bronchial tubes, or by the hollow cavernous and gurgling sounds attending destruction of the lung tissue, are pathognomonic signs of the disease. Early in the disease, the foundation of inflammatory products on the surface of the pleura is indicated by the leathery friction sounds produced by the inflamed surfaces rubbing over each other, and as the exudation into the pleural cavity increases the respiratory sounds disappear. If the disease progresses, the symptoms increase with more or less rapidity, the cough becoming more constant and severe, the respiration more difficult, as is shown by its quickened and spasmodic character, by the dilated nostrils, the arched back, and the efforts made by the animal to relieve the affected chest by breathing with the abdomen, drawing up the hind legs, throwing the body forward, the chest, owing to its peculiar construction, being thus expanded. If lying, the animal rests on the affected side, leaving the other as free as possible. Each expiration is accompanied with the characteristic moan or grunt which is present from the first stages, or, if absent, may be elicited by pressure on the intercostals. The dyspnea becomes intense, and there is a free discharge from the widely dilated nostrils and eyes, thin and serous at first, which gradually becomes thick, yellow, and purulent. If in the open field, the sick animals separate themselves from the unaffected members of the herd, stand persistently with widely distended legs, and present a physiognomy that is very characteristic of the disease.

While the general temperature of the body as shown by the thermometer is greatly increased, the extremities and horns may be quite cold; frequently the peculiarity being exhibited of a single horn or foot only being thus affected. The skin increases in hardness and dryness, and instead of slipping over the subcutaneous tissue as in health seems to become adherent to it. The pulse, which may be felt in the submaxillary artery of the jaw, or in the brachial at the inner side of the fore leg, is increased from its normal rate of 40 or 50 to 80 or 90, and is small and wiry in character. Even in health, the pulse of cattle is accelerated by confinement in close sheds or barns, and in disease there will be a corresponding increase under like circumstances. The respirations, usually 10 to 15 per minute, are increased to 35 or 40, and

the normal relation between the pulse and respirations of 4 to 1 disappears. The signs elicited by auscultation and percussion are here of great value in indicating the progress of the disease. The dry friction sound at first produced by the inflamed pleura is modified as the membrane becomes roughened from the deposit of lymph on its surface, and still further by the filling of the cavity by the enormous exudation. The presence of crepitation soon indicates that not only the surface membrane is involved, but that the lung substance itself has also been invaded, and the advent of râles and sibili demonstrate that the bronchial passages participate in the general affection. Even when the consolidation is extended, it does not wholly mask the sounds produced by the affected pleura and bronchi. It is a disputed point whether the disease primarily extends from the pleura or from the bronchi to the lung substance, but it is certain that both surfaces are seriously involved in all fatal cases. The dullness and tenderness elicited by percussion will be in proportion to the amount of the disease. If but one lung is affected, the resonance is markedly increased and the respiration louder than natural in the other. The invasion of both lungs warrants an unfavorable prognosis. The preceding symptoms are those which accompany the active inflammatory stage, when free exudation into all parts of the lung is going on, which may be checked within such limits as to permit of resolution or recovery in a limited number of cases, or may proceed to such an extent as to destroy the animal by suffocation from compression of the lung by the amount of pleural effusion, or from occlusion of the air cells, or even of the bronchi, by the exudation which is so freely poured into them, as well as by the inflammatory products of their own surfaces. In some cases where the consolidation is limited to the central portions of the lung, the ordinary physical signs are not observable, and the principal symptom manifested is that of excessive coughing when the animal attempts to swallow. If the affection proceeds beyond this stage, a new train of symptoms will arise from the disintegration that must almost necessarily ensue. The formation of abscesses, gangrene, and the general breaking down of the pulmonary tissue are attended with symptoms of purulent infection that are unmistakable. The temperature, which during the inflammatory stage was persistently high, becomes variable, the breath and the discharges from the nostrils are intolerably fetid, and portions of gangrenous lung may be coughed up; the animals become very weak, colliquative diarrhoea replaces the constipation that existed, and death is induced by exhaustion. The post-mortem appearances found in animals that have died of the lung plague vary greatly, but have the common feature of being symptomatic of a low form of inflammation of the pulmonary structure, with more or less free exudation into its substance. In animals slaughtered during the early stages of the disease, the pleura will be found to have lost its natural smooth,

glistening character, to be reddened and thickened, with a varying amount of exudation into its cavity, and patches of yellow lymph deposit scattered over its surface. In the lung substance the inflammation exhibits the peculiar characteristic of not spreading by diffusion to contiguous parts, but invades separated groups of lobules at a distance from each other, the intervening parts retaining their normal character until separately attacked in their turn. This feature of the disease presents strong evidence in favor of its specific character, the local change being dependent on some general exciting cause in the blood. In the early stages the normal pink color of the lung is replaced by red, gray, or blue patches, formed by the isolated groups of consolidated lobules, and as the exudation occurred at different periods softening will be in progress in some of these, so that the conditions known as red and gray hepatization may exist at the same time. The affected portions of lung are swollen, increased in density and friability, and the normal resiliency, crepitation, and inflatability are lessened. With a little effort the parenchymatous structure may be detached from the interlobular tissue by which it is normally supported. The air passages are often seriously affected at a comparatively early period, the larger bronchi being lined with flaky deposits of lymph, and the smaller tubes quite or nearly occluded by exudation similar to that found in the pleural cavity, and by new elements formed from the tube-walls. Even the blood-vessels of the affected parts may be found obliterated by coagula of blood or lymph. As the disease progresses, the amount of effusion into the pleural cavity generally increases, but without apparent cause the quantity found will vary in different cases from a few ounces to several gallons. At first clear and serous in character, it soon becomes turbid from admixture of flaky lymph and of pus and fat cells in small amount. It coagulates on cooling, so that in an animal inspected some time after death the pleural effusion may be found of a gelatinous consistency. The entire pleura is thickened, mottled, and rough from the extensive deposits of lymph, and adhesive bands of false membrane are formed between the surfaces. These are sometimes so extensive as to make a sort of net-work, holding in its meshes the thickened flaky exudation. The strength of the adhesions is determined by their age and by the character of the inflammation; generally they are very friable, and break down easily under the hand. Only in old cases, especially in such as have developed a tendency to recovery, do they acquire any tenacity. The pericardium becomes involved in the same manner as the pleura, and the connective tissue of the chest is greatly thickened from inflammatory deposits. The lung becomes greatly increased in bulk, in weight and density, and in friability from the excessive exudation going on in its substance. On section, it presents a marbled appearance, due to the peculiar arrangement

of the connective interlobular tissue, which has an excessive development in the lungs of cattle, and distinctly marks the boundaries between the groups of lobules, — a prominence still farther increased in this disease by the participation of the connective tissue in the general inflammation, and the development of new elements in its structure to such an extent as to cause marked thickening with formation of lymph, so that it may be seen traversing the lung in broad yellow striæ, irregularly mapping out the islands of lobules inclosed by it. Not infrequently the inflammatory process in the interlobular tissue is sufficiently active to produce suppuration and the formation of small cavities in its substance. The disease is found in its most advanced stages in the lower portions of the lung, where extensive red and gray hepatization may exist, while the upper portion is only slightly congested or œdematous. On cutting into the lung and suspending it, large quantities of blood-stained serum will drain away. The increased density and weight of the lungs are made apparent by placing them in water, when they quickly sink; or, better still, by weighing them in water, when the normal weight of six or eight pounds will be found increased to twenty, thirty, or even forty pounds.

Where animals that have died of the disease have been prepared for market, the ordinary evidences of the affection may have been removed by the careful sponging of the effusion from the chest, and trimming off the adhesions and lymph formations, so that a thickened pleura may be the only prominent sign of the disease. The most careful trimming of the chest walls, however, will not remove the adhesions, but the distinction should be noted whether these are recent or old, as a certain number of cases of the disease tend toward resolution, and the animal may have lived in good condition for years after having had the disease. Taking in connection with the weight and density of the lung its degree of resiliency and inflatability, and the appearances presented on section, it is not difficult to decide, even after the intentional removal of the usual formations on the pleura and in its cavity, whether or not an animal has been the recent subject of contagious pleuro-pneumonia. When the disease proceeds to such an extent as to result in empyema, abscess, or gangrene of the lung, the appearances presented differ from those found in the human subject, under like conditions, only in degree, and the attendant phenomena of large collections of fœtid pus in the pleural sac, the formation of purulent cavities in the lung, and the general breaking down of the pulmonary tissue will be sufficiently familiar to medical observers without farther description.

The lung plague possesses some features that distinguish it from the idiopathic pleuro-pneumonia that may prevail among cattle under certain conditions. These are its long periods of latency, its insidious character, its tendency to prevail in epidemic form, and the low asthenic

type of the disease, as compared with the sudden onset, rapid development, and acute inflammatory symptoms of the idiopathic affection. In the post-mortem appearances of the latter affection the inflammation is of a plastic rather than of a destructive type, and is regularly diffused instead of assuming the patchy form seen in the contagious disease. These distinctive features, however, are not sufficiently marked to form certain diagnostic signs, and those who are most familiar with the insidious characteristics manifested by the contagious affection are compelled to admit that there are no certain means of distinction, and are disposed to recommend that all suspicious cases, where the origin cannot be properly attributed to extreme conditions of weather, or other exciting causes, should be regarded and treated as cases of the contagious affection. Certainly they should be so considered when there is any epidemic manifestation. Treatment of the disease by medication in any form has been found of little benefit: and as each animal affected becomes a new centre of contagion, from which the disease may be spread during the whole period of its prevalence, early isolation and slaughter of the infected animals, and thorough cleaning and disinfection of their quarters and of all articles that might carry the contagious principle, are the most economical and effective means of dealing with it. Efforts to save the animals by treatment are advisable only when the disease prevails to such an extent as to preclude hopes of stamping it out. The flesh of cattle dying in advanced stages of the disease should be deeply buried, with a free supply of corrosive disinfectants, and if the hides, horns, and hoofs are saved healthy cattle should be carefully protected from exposure to them. The fluid exuded into the lungs and pleural cavity has the property of producing a modified affection with several local symptoms, when healthy animals are inoculated. Inoculation secures immunity from the disease for a period of two to four years. This practice has been extensively pursued in countries where the disease has gained such a foot-hold as to prevent its eradication, and it is only under such conditions that the practice is advisable, as each animal inoculated becomes a new source of contagion, from which others may be infected. The fact of the prevalence of the disease on the Atlantic coast, and the exemption which the Western States have heretofore enjoyed, is explained by the direction taken by the cattle traffic, which is almost wholly from the West toward the East. The ordinary Eastern cattle, among which the disease would naturally prevail, are rarely shipped westward, the limited number of valuable imported animals sent in that direction being selected and guarded with special reference to securing their exemption from the disease. Should the disease, however, once be allowed to gain a foot-hold among the vast herds of the West, where the conditions are such that no control could be exercised over the animals affected, it would probably be a permanent one, and result in immense injury to the agricultural interests of the country.

RECENT PROGRESS IN DERMATOLOGY.¹

BY JAMES C. WHITE, M. D.

Hæmorrhagic Eruption caused by Salicylic Acid. — Freudenberg reports² the occurrence upon the skin of numerous and large petechiæ and vibices after the use of salicylic acid for six days, which continued to appear for a day after the omission of the drug. The eruption became paler, and terminated after a week in excessive desquamation of the affected parts. After the disappearance of the cutaneous symptoms the acid was again given, but it was immediately followed by the same hæmorrhagic manifestations, and by desquamation as after scarlet fever.

Ciclotrophia Folliculorum. — Under this title Dr. Tillbury Fox, of London, describes³ an affection of the follicles of the skin as one hitherto not recognized as a distinct disease. The excellent colored plate which accompanies the reprint represents apparently a case of aggravated keratosis pilaris, and indeed he states that "at first sight the disease would seem to be nothing more than severe follicular torpor or lichen pilaris, and I doubt not has been regarded as such by those who have met with cases of the kind." According to his description, it consists of an eruption of solid red papules, the size of a small pin's head, seated at the hair follicles. All the papules are seen to be plugged by exuviae of adherent scales. It affects chiefly the outer aspect of the upper arms, the shoulders, the thighs, and the sides of the face and forehead. Although having associated with it occasional acneiform appearances, "the disease is certainly not an inflammatory condition." In this general description and in the account of the four cases given in detail by the author, there is nothing which would distinguish the manifestations from those of keratosis or lichen pilaris, as recognized by most modern writers on dermatology. In fact, a distinct affection can only be made by Dr. Fox by restricting the ordinary meaning of this latter disease within limits not generally recognized by German and American dermatologists. It is in some degree of common occurrence, as seen upon the upper arms of young women when exposed in society, giving the peculiar harsh and permanent goose-flesh-like appearance to the part. When of wider distribution and of more aggravated type, it is apt to be associated with a xerosis of slight character, and mistaken for true ichthyosis. The author advises the frequent use of baths and soaps, and inunction with oil, — means which tend to loosen the plugs from the follicles and to stimulate the activity of the glands.

Trichorrhexis Nodosa Barbae. — Of this rare affection of the hair Dr. Schwimmer, of Budapest,⁴ publishes an account, based upon a case recently under his observation. It affects principally the beard, and is characterized by nodular swellings along the shaft, which are of lighter color than the latter. At these points the hair breaks readily, and exhibits a finely splintered end resembling a broom. Microscopic examination reveals an atrophy of the root and a sep-

¹ Concluded from page 779.² Allg. med. Central Zeitung, October 26, 1878.³ The Clinical Society's Transactions, vol. xi.⁴ Vierteljahresschrift für Derm. und Syph., 4. Jahrg. 4 Heft.

aration of the fibres of the shaft at the affected points, with rupture of cuticula in consequence of the bulging. Beigel has called the disease bursting of the hair. It is not of a parasitic nature, but the process is a mysterious one.

Removal of Superfluous Hairs. — Dr. Michel,³ of St. Louis, and Dr. Fox,⁴ of New York, have recently published articles upon the use of electrolysis in hirsuties. The former gentleman first introduced this method for the relief of trichiasis and distichiasis, after trying several other ingenious plans which were less successful than this. He has applied it in cases of extensive hirsuties as well, and claims that fully ninety per cent. of the larger hairs may be permanently destroyed by it at the first trial. He introduces a gilt needle the entire length of the hair follicle, places the sponge electrode upon the neighboring skin, and passes through the former a current from some eight medium-sized cells, one strong enough only to produce the slow decomposition of water. The action is continued until froth oozes out around the needle, generally in from two to five seconds. Scarcely any shock is felt, and the hair generally falls out on the removal of the needle. The coarser the needle the more certain the destruction of the papilla. No cicatrix follows the operation. Fifteen or twenty hairs may be operated upon at one sitting with scarcely any soreness of the parts after a few hours. Dr. Fox uses an ordinary galvanic battery, with a fine platinum wire electrode in place of a needle, as he thinks that it follows the course of the follicle during introduction on account of its flexibility better than a stiff needle. He also prefers to pull the hairs before inserting the wire where the follicles are large and the former are not needed to guide the insertion of the needle. He believes that the papilla cannot be destroyed without some pain, and states that the first effect of the frying process is the development of an urticarial wheal about the needle. He recommends operation only upon the large and colored hairs, and of these he states that a certain number are almost sure to grow again unless the operator has an unusual amount of skill and practice.

Angioma Pigmentosum et Atrophicum. — Dr. Duhring reports⁵ a case of this rare affection (xeroderma or parchment skin of Hebra). The disease, as the above title adopted at the last meeting of the American Dermatological Association implies, is a new growth of vessels, a hypertrophy of pigment, and an atrophy of the dermal tissues combined. In this case the disease occupied the scalp, face, ears, neck, chest, back, arms, legs, and backs of hands and feet. It consisted of scattered, freckle-like depositions of pigment, of a tint varying from yellow to black; of linear, or round, minute telangiectases; and white atrophic spots, varying in size from a pin's head to a split pea. The patient was seventeen years old. The disease began to make its appearance at the age of six months in the form of freckles, and progressed until she was nine years old. During the past five years the freckles had been noticed to disappear in places, and to be replaced by areas of thin, white skin. The relation of these lesions one to the other Dr. Duhring believes, from the study of his case, to be as follows: The pigment spots, the first to appear, are succeeded after a time in places by the development of telangiectases, which continue for

³ St. Louis Clinical of Medicine, February, 1878.

⁴ New York Medical Record, February 2d, p. 270.

⁵ American Journal of Medical Science, October, 1878.

a longer or shorter time, when they contract, undergo atrophy, and finally disappear, to be followed by the atrophic spots. Dr. Taylor, of New York, who has had the fortunate opportunity of studying seven cases of the disease, and who has made two detailed reports of the same, differs from Dr. Duhring in respect to this relationship between the lesions. In his opinion¹ there is, after a general hyperæmic stage, dilatation of the capillaries. Then these increase in size by new growth of their elements, which gives rise to the red spots which constitute the first stage of the disease. After remaining a variable period, these minute capillary new growths undergo atrophy, leaving on their site brown spots; this constitutes the second stage, which may be repeated several times. The third consists in the subsequent atrophy of the skin itself in these spots. As further manifestations or sequelæ, there were developed in the severest cases about the face tumors of one or more kinds. These were angiomaticous and myxo-angioma. Later there was developed epitheliomatous disease, as observed by Heitzmann and Kaposi.

Inflammatory Fungoid Neoplasm. — By this name Dr. Duhring designates a case of rare cutaneous disease, which he exhibited and described in an exhaustive communication to the Saratoga meeting of the Dermatological Association last year. This he has now published,² with a plate of the gross appearances of the case. Two other instances of the affection, occurring in the practice of Professor Hebra, and described by Hans Hebra and Professor Geber, are the only others on record. The lesions are of several kinds, in the form of more or less flat patches, or of prominent tumors or fungoid formations. The flat patches vary in size from a finger-nail to the palm of the hand, and are on a level with the surrounding skin, or elevated slightly above it. They may be superficial or deep seated, smooth, scaly, or crusted, and of a yellow or reddish color. The tumors are round or ovalish, tubercular or fungoid in character, of a light red or violaceous color, and vary in size from a pea to an egg. They may be lobulated and depressed in the centre, smooth, or ooze a thin, bloody serum, which dries into crusts upon them. All regions of the body are liable to be affected, but the face particularly. The lesions appear either suddenly (within a few hours even), or gradually in the course of weeks or months. Having attained a certain size, they soften and undergo spontaneous involution, leaving no scar or pigmentation. Dr. Duhring regards the growths anatomically as a kind of granuloma at the start, while the later tumors are fibro-sarcoma. The patient was a lady, fifty-eight years old, whose general health was excellent. The disease began in August, 1876, and had been a year under the author's daily observation before the publication of this article, during which time it had affected nearly every square inch of the body. Excision has been performed upon some of the tumors with favorable results.

Pyrogallie Acid in Lupus. — In addition to his study of the action of this substance upon patches of psoriasis, mentioned in our last report, Jarisch publishes³ the results of his experiments upon its action in lupus. After the continued application of a ten per cent. salve for three days, the cell infiltration

¹ Transactions of American Dermatological Association, vol. ii.

² Archives of Dermatology, January, 1879.

³ Wiener med. Blätter, Nos. 15 and 16, 1878, in Viertelj. für Derm. und Syph., vi. Jahrg. 1 Heft.

which constitutes the characteristic tubercles is destroyed, whereas the intermediate portions of healthy skin are scarcely acted upon. On the third day the application becomes very painful, and remains so for some time, even when the parts are dressed with a neutral salve like vaseline. Reaction in the surrounding tissues seldom occurs. Cicatrization of cauterized parts takes place in from one to three weeks, but is followed always by the development of new lupus nodules, which makes a frequent repetition of the application necessary. The resulting cicatrices are distinguished for their smoothness, whiteness, and softness. It seems to be effective in all forms of the disease. During three months of last year it was used exclusively in the clinic upon thirty-one cases, nineteen of which were discharged either completely cured, or greatly improved. In epithelial carcinoma its effects were somewhat doubtful, but Kaposi speaks¹ of its action here as remarkably favorable.

Combination of Lupus and Carcinoma. — In an able review² of the histological relations of these affections, in explanation of their occasional combination, Kaposi concludes that the epithelial cancer takes its origin from the exuberant epithelial hyperplasy which characterizes lupus, while that later in its course the carcinoma may develop also from the connective-tissue corpuscles, exudation, and lupus cell elements.

Pruritus Vulvæ. — Dr. Thomas, of New York, in a lecture³ on this subject, states that leucorrhœa is usually at the bottom of the trouble, and this of that peculiarly acrid variety which causes stinging of the finger after a vaginal examination, or which gives rise to urethritis in the male after connection, which can only be distinguished from that of a specific character by its short duration and easy curability. If in any case it is desired to test whether vaginal leucorrhœa is the cause of pruritus, the vagina may be thoroughly tamponed with cotton, which should be thoroughly saturated with glyceride of tannin. If it is really the cause, this mere damming up of the discharge will make the matter clear, for in twelve hours the patient will experience the greatest relief from her suffering.

The Botanical Relations of Tricophyton Tonsurans. — Dr. Atkinson, of Baltimore, publishes⁴ the valuable results of his cultivation of the fungus in tinea tricophytina (ringworm). His experiments were carried on with extreme care, and were as free from error as it seems possible to make them. Although germination was very slow when thus conducted, the results, when not negative, were uniform, — “invariably a multitudinous and simultaneous outburst of hundreds of spores.” Hyphæ were then thrown out in abundance from the spores, which branch and interlace, and with the mycelium generate sporangia. Although foreign growths penetrated the culture cells from without and developed luxuriantly, they were easily distinguished from the vegetation of tricophyton. Dr. Atkinson concludes from his investigations that the latter is to be assigned to the mucors. The importance of such trustworthy studies of the botanical nature of the para-sitic fungi of man cannot be overestimated,

¹ Wiener med. Wochenschr., No. 44, 1878, in Viertelj. für Derm. und Syph., vi. Jahrg. 1 Heft.

² Vierteljahresschrift für Derm. und Syph., vi. Jahrg. 1 Heft.

³ Archives of Dermatology April, 1879, from Philadelphia Medical Times.

⁴ New York Medical Journal, December, 1878.

for it is by such means alone that our utter ignorance concerning them is apparently to be enlightened. Some of the work done in this direction has been so unscientific, and the hasty conclusions published as demonstrated facts are so entirely unreliable, that this branch of study has fallen into undue discredit. We are pleased to know that Dr. Atkinson is engaged in similar investigation of the other vegetable parasites of the human skin.

Demodex Folliculorum. — Neumann contributes¹ the results of his study of this animal in dogs and swine. As is well known, it produces no visible effects upon the skin of man, although of very common occurrence. Upon these animals, however, it produces various forms of disturbance, firm, yellowish globular elevations resembling milia, nodules, pustules, crusts, superficial ulcerations, cicatrices, and pigment deposits, with loss of hair. In a single follicle of the hog he has found from one hundred to two hundred animals; also great numbers in the glands of the dog. For the effect of these parasites upon the skins of oxen see report in this journal of June, 1878.

Albuminuria from Styrae Inunction. — Unna publishes² the results of a methodical examination of the urine of one hundred and twenty-four patients with scabies in the Hamburg hospital during their treatment. The latter consists of the inunction of an ointment of styrax three times in thirty-six hours, the patient remaining in bed wrapped in woolen blankets in the mean while. The examination was made on the first and third mornings, and in nine of the cases there was discovered a considerable quantity of albumen, which, however, rapidly disappeared. This, in Unna's opinion, is to be accounted for by the absorption of the balsam into the circulation and its passage into the urine.

PENNSYLVANIA STATE MEDICAL SOCIETY.

THE thirtieth annual convention of this society was held at Chester, Pa., from May 21 to 23, 1879. It was one of the largest meetings that had ever assembled in the history of this association, and had nearly two hundred members in attendance. After an address of welcome by Dr. Ulrich, of Chester, of the committee on arrangements, Dr. Charles T. Hunter, of Philadelphia, read the annual address on Surgery, which carefully reviewed the recent progress in this department of medicine. In discussing the treatment of wounds of the soft parts, he insisted upon the observance of three especial principles: (1) early arrest of hæmorrhage, (2) free drainage, and (3) absolute rest. He declared that in order to secure good results it is essential to recognize the causes that retard healing, among which are prominently placed (1) the presence of a foreign body, (2) hæmorrhage, (3) separation or retraction of the sides of the wound, (4) disturbance of wound by voluntary or involuntary movements, and (5) retention of discharges which are liable to undergo decomposition. The success of any plan of treatment will, *ceteris paribus*, mainly depend upon the surgeon's power to prevent or render nugatory all of those causes that have been found so adverse to primary union. The first step

¹ Viertelj. für Derm. und Syph., vi. Jahrg. 1 Heft, from Anz. d. Ges. d. Aerzte in Wien, No. 7, 1878.

² Viertelj. für Derm. und Syph., vi. Jahrg. 1 Heft, from Virchow's Archiv.

in the treatment is the removal of all foreign bodies, including blood clots, both large and small, which if allowed to remain would inevitably interfere with immediate union. "A still more cogent reason for the removal of all clots is the fact that minute coagula (which are always to be seen scattered over the fresh surface of a recent wound after active hæmorrhage has been checked) conceal small vessels that are liable to bleed again so soon as the wound is closed and reaction established." Inasmuch as the result of secondary hæmorrhage is to separate the walls of the wound by a coagulum, or to persist until the surgeon opens the wound and secures the vessel, the lecturer advocated the reopening of the wound as soon as the hæmorrhage is detected, if bleeding take place early, in order to turn out the clots, *even if the hæmorrhage have spontaneously ceased*. Should any bleeding points be detected, he recommended the application of a fine catgut ligature cut short. Where a drainage tube is used the need of opening the wound for the removal of clots is not so imperative.

Among hæmostatic agents the ligature is placed first; and although torsion, theoretically, has superior advantages, yet it was doubted whether surgeons generally could ever be persuaded to repose as much reliance in it as in the ligature. There has not been sufficient evidence adduced to prove that the thread ligatures favor septicæmia by becoming saturated with the discharges, as has been asserted. The so-called catgut ligature¹ of Professor Lister was recommended as possessing all the advantages of torsion (by not acting as a foreign body), added to perfect reliability. The gut-cord is aseptic and un-irritating, and becomes finally softened and absorbed. He also recommended the approximation of large nerves and tendons by fine animal ligatures. In a large wound some provision should be made for drainage; when this is provided for the dressing should be disturbed as little as possible. After dwelling upon the importance of accurate coaptation of the edges of wounds, by rather an excess of sutures than too small a number, he insisted upon the immobilization of the surrounding parts; to secure this in wounds of the extremities the first joint above and all the joints below the injury should be fixed. This he declared to find its especial application in gun-shot wounds. He advocated dry dressings of the simplest character, such as patent lint, absorbent cotton, charpie, and carded oakum. "The substances that will most readily absorb the discharges as they flow from a wound are the best agents that we have for supporting the sides of the wound and for affording gentle compression." The latter point, that is, that of producing gentle methodical compression, is of great service in aiding early union.

In conclusion, the importance of the daily use of the thermometer as a guide to the condition of the patient after operation and the state of the wound was dwelt upon at some length. While the thermometer is normal (not over 100° F.) and the patient comfortable, there is generally no need to disturb the dressings, but should there be irritative fever the wound should be carefully examined. He had obtained such satisfactory results from pursuing the above precautions that he had not adopted the antiseptic system in its completeness.

At the conclusion of this address, Dr. William Goodell read a practical paper on The Extirpation of the Ovaries for some of the Disorders of Men-

¹ Made from the peritonæum of a sheep, and soaked in carbolic oil.

strual Life, in which, after referring to the causes of pernicious menstruation and its results, expressed by emaciation, suffering, hysteria, epilepsy, insanity, and a host of evils only to be terminated by the menopause, he discussed normal ovariectomy as a procedure calculated to give relief, and gave the clinical notes of four cases upon which he had performed this operation. Two of these were greatly benefited; one died; the other, who suffered from insanity, had not given signs of mental improvement, but her physical health was excellent.¹

Dr. Isaac N. Kerlin, of Media, read a paper on Juvenile Insanity, illustrating the fact that insanity may appear quite early in childhood, and that it is not unknown even at three years of age.

Dr. Charles S. Turnbull, of Philadelphia, exhibited a horse which had a living filaria (about five inches long) in the anterior chamber of its left eye, and read a short account of a case of intra-ocular, living cysticercus successfully removed from the eye of a man (forty-five years of age) by Dr. J. E. Garretson, of Philadelphia.

The annual address of the president, Dr. James L. Stewart, of Erie, was delivered on Wednesday evening, May 21st. The topic selected was the labors and achievements of physicians of past generations, which it was feared are too often underrated or forgotten by those of the present day.

Dr. Hiram Corson, chairman of the committee appointed to consider the subject, made a majority report on memorializing the legislature in favor of female superintendents for female departments of state hospitals for the insane. A minority report was received in opposition to this project, in which the egregious folly of the measure was briefly but pointedly demonstrated. The majority report was received and adopted by a close vote.

Dr. John Carwen, of Harrisburg, read an interesting report from the committee on epilepsy and insanity.

Papers were also read on Cholera Infantum, by Dr. Ellwood Harvey, of Chester; On the Diagnosis and Treatment of Fractures near the Joints, by Dr. John H. Packard, of Philadelphia; Examination of the Usual Signs of Dislocation of the Hip, and an Inquiry into the Proper Course to pursue when the Dislocation is complicated with Fracture, by Dr. O. H. Allis, of Philadelphia; and Fracture of the Lower End of the Radius, by Dr. Richard J. Levis, of Philadelphia, with a new radial splint.²

In the afternoon, Dr. R. A. Cleemann, of the Philadelphia Board of Health, read the Address on Hygiene; Dr. William Pepper presented a Clinical Contribution to Exophthalmic Goitre; and Dr. J. V. Shoemaker gave an account of some of the points in the external treatment of skin diseases.

Dr. Peter D. Keyser, of Philadelphia, read a report on the examination of some railroad employees for color-blindness, in which he stated that he had examined the train hands of the Philadelphia, Wilmington, and Baltimore, the Delaware, the North Pennsylvania, and the Bound Brook railroads, and had found that three and a half per cent. of the whole number mistook colors one for the other, that eight and a half per cent., although able to recognize the colors, were unable to tell the shades; thus making twelve per

¹ Dr. Goodell's paper will appear in our next issue.

² This will be subsequently described and figured in the *JOURNAL*, in a clinical contribution from Dr. Levis.

cent. of those examined who were not quick and sharp in the noticing and distinguishing of all colors or shades. But of this twelve per cent. only three and a half were of such a character of defect as to make them really incapable and unsafe to fill the positions they occupied. In the examination several methods were used, so as to make no mistake. The method of Professor Holmgren, of Sweden, in testing with skeins of colored worsted, was first used; then that of Dr. Stilling, in which colored letters on a black card are displayed, after which plates of colored glass are held in front of a gas flame in a darkened room; and finally the different signal lamps used on the roads were brought before the men in various ways. The men were at first tested in the evening by gaslight, and those found in the least defective were re-examined very carefully in daylight. The refraction of the eyes was observed in each case with the ophthalmoscope and vision taken, and of the number examined 79.4 per cent. were emmetropic, fourteen per cent. hypermetropic, 3.9 per cent. myopic, and 2.68 per cent. astigmatic. Of the color-blind, forty-seven per cent. were emmetropic, thirty-five per cent. hypermetropic, twelve per cent. myopic, and 5.9 per cent. astigmatic. Of those who only shaded badly, 77.5 per cent. were of perfect vision, 17.5 per cent. hypermetropic, 2.5 per cent. myopic, and 2.5 per cent. astigmatic.

"It will thus be seen that color-blindness is not governed by any defect of refraction. Neither has age anything to do with this anomaly, for those found defective ranged from twenty to fifty-three years of age. Of these, 49.9 per cent. were green blind, 44.4 per cent. red, and 5.5 per cent. blue. Of the eight and a half per cent. defective in shading, ninety-five per cent. were so in greens and five per cent. in reds. I have no doubt that the cause of these being so defective in shading colors is due to the want of education. None had ever been placed in a position or condition to handle and examine colors.

"My attention was attracted to two peculiarities among those found color-blind. One was the fact that two men, who could not distinguish red from green on test, had educated themselves to know that red was an intense color, and thus distinguished bright red signals; but at the same time bright greens and other bright colors were red to them, and for such they said they would stop the trains, thus being on the safe side. But green they called a deep or dull color, and dark reds, dark greens, and browns were all green to them, and they would pass them by as signifying that all was right. The other peculiarity was the power of distinguishing bright red when held within three feet of the eyes, while at ten, twenty, and thirty feet it was invariably called green. In sorting the wools bright reds and light greens were picked out together for red. Vision was normal, $\frac{20}{xx}$.

"Last winter, with the assistance of Drs. Fessenden and Foster, I examined the boys of the Keystone Grammar School, one hundred and seventy-six in number, of whom eighteen were defective; none, however, were really color-blind, but all were defective in shading. One said that all the dark shades of yellow were brown; with eight others purples were blues; two said that dark green was brown; one took light browns for red, and the rest shaded badly in greens."

The paper was interesting and attracted considerable attention.

The following officers were elected to serve the ensuing year: President,

Dr. Andrew Nebinger, of Philadelphia. Vice-presidents, Drs. W. B. Ulrich, of Delaware; Jacob L. Ziegler, of Lancaster; George A. Lynn, of Washington; and Joseph A. Murphy, of Luzerne. Permanent secretary, Dr. W. B. Atkinson. Corresponding secretary, Dr. O. H. Allis. The delegates to the American Medical Association, besides other officers, were selected. The next meeting will be held at Altoona, on the third Wednesday of May, 1880. In the evening a largely attended reception was held in the hall, given by the Delaware County Medical Society. On the subsequent day the association visited the Training School for Feeble-Minded Children at Media, and were much interested in the aptitude and ability of the children.

CONNECTICUT MEDICAL SOCIETY.

THE eighty-eighth annual session of this society was held in Hartford, May 28th and 29th, with the largest attendance for many years and the largest accession of new members, including quite a number of practitioners who have heretofore kept aloof; at no time have there been so many interested actively in the society, nor so many engaged in professional work, whose results were here shown. The establishment of the State Board of Health and the field thus opened have stimulated professional thought and effort along all lines, and given a more lively interest generally in those subjects that are occupying the attention of the thinkers and workers in the profession. The younger men, too, that have been coming into the State, educated by newer and better methods, and of a broader and wider culture generally than were attainable in older times, are beginning to make their influence felt, while a larger proportion of the new members have both leisure and ambition to work. Death is rapidly thinning the ranks of the older members, sixteen in 1877, fourteen in 1878, all averaging sixty-two, and many considerably over eighty, some of the lives reaching back to the very inception of the society, but of course no professional life. Among the dead is one honored name, an honorary member of this society from your own State, — Jacob Bigelow.

The special topics discussed were the proper management and care of the insane, the metric system, a proposed law relating to medical tramps or itinerant practitioners of medicine, and the medical-examiner system of Massachusetts. These were brought before the attention of the society by the president in an address to the Fellows on the first day's session, which is for business, when delegates from the county society, or Fellows alone, have the voting power. Committees were appointed on these subjects, in accordance with the president's recommendations: that on the treatment of insanity to consider also the propriety of commissioners in lunacy for this State. That on the medical examiner system was requested to investigate its workings in Massachusetts, and report as to its desirability for Connecticut at the next convention. Committee: C. W. Chamberlain, Hartford; E. C. Kinny, Norwich; N. E. Worden, Bridgeport.

The following are the provisions of the proposed bill concerning itinerant practitioners: First, a conjoint board from the three medical societies in the State, two from each. Second, an examining fee of twenty-five dollars in ad-

vance. Third, a monthly tax of from twenty-five to one hundred dollars a month in town, village, or city, and ample fines for attempted evasion. The measure did not find favor, however, and was rejected, although it came over from a preceding convention. The general sentiment of this society is that it is neither wise nor expedient for us to try to induce legislation on the subject until public sentiment changes radically on these topics.

The revised charter for Yale Medical School removes the restrictions on the course to be followed, and allows the faculty to raise the standard of attainment as rapidly as circumstances will allow. The graduating power is still in the hands of a conjoint board of the professors and an equal number of examiners appointed by the society, and its president is *ex officio* president of the examining board. The power to appoint one gratuitous student from each county is given up, and the whole instrument much simplified. The most important changes are those rendering possible a graded course.

Delegates were appointed to the International Medical Congress at Amsterdam: Prof. Francis Bacon, New Haven; Dr. B. N. Comings, New Britain. The following officers were elected for the ensuing year: president, Dr. A. R. Goodrich, Vernon; vice-president, Dr. G. L. Platt, Waterbury; treasurer, Dr. F. D. Edgerton, Middletown; secretary, Dr. C. W. Chamberlain, Hartford. The delegates appointed to the Massachusetts Society were Drs. Wm. Deming, Litchfield, A. B. Woodruff, Thomaston; the committee to investigate the medical-examiner system also will have one representative. All vacancies in delegations are filled by the secretary when possible.

Dr. A. N. Bell, Garden City, Dr. E. Seguin, New York, were nominated for honorary membership, and by rule their names are to lie over one year.

The treasurer's report showed an increased expenditure, and about the same income, to a smaller balance; some portions of the State are very delinquent.

The trial of Dr. M. B. Pardee, of South Norwalk, by the committee on county resolves, before whom all such matters go, excited, perhaps, as much interest as anything connected with the session. The case was sent up last year by the Fairfield County Society, with a sentence of expulsion, which must in all cases be ratified by the state society to be valid. The principal charge, consultation with his wife, who is a homœopathic practitioner, was considered not proved last year, and so the case went back to the county. This year the county society makes the charge of gross professional misconduct, and thereupon expel him, and this sentence was confirmed after a long trial and sharp debate. Pardee reading a lengthy statement in his own defense. This committee did not report until the evening session, which was prolonged until ten o'clock, when a collation was given to the society by the Hartford City Medical Society, which proved very pleasant; there were short, bright, witty speeches, good stories, and general good cheer until the small hours. The presence of Dr. Benjamin Cutting, an honorary member of this society from Massachusetts, added much to the pleasure of the occasion, while Prof. W. A. Hammond, of New York, was also very felicitous in story and repartee. This reception is a new and promises to be a very enjoyable feature of these meetings.

MAY 29TH. The address of the president was upon Honesty in Medicine, and was a criticism upon some of the admitted evils in professional life; he

discussed medical education, and consultations, claiming that an honest opinion should never be compromised or surrendered, and the patient free as air to change his physician, select the consultant or any other. The disgraceful condition of medical expert testimony was freely discussed, and many minor points in the relations of professional life dwelt upon where greater openness was desirable. Dr. Bartlett, of New Haven, read *On the Principles of Hygiene and Conservatism in Surgery*. He illustrated the modern improvements in the treatment of surgical cases, especially according to the antiseptic method, and discussed the whole subject at length in a very able manner. After Dr. Bartlett had concluded, the chairman called upon Dr. A. Hosmer, a delegate from the Massachusetts Medical Society, who replied in a very happy vein. Then Dr. Lathrop, of the New Hampshire Medical Society, was introduced, and said a few words in reply. Then Dr. Cotting, of Boston, was called upon, and made a bright little speech, at the close suggesting to members to subscribe to the Boston Medical and Surgical Journal. Next, Dr. Webster, delegate from Maine, was called upon. Finally, Dr. Hammond, delegate from the Neurological Society of New York, was introduced, and replied forcibly and briefly.

A report on vital statistics was presented by Dr. Chamberlain, superintendent of vital statistics for Connecticut, containing a *résumé* of the points in epidemiology and sanitary science, illustrated in the returns of 1878 and the results of a study of diphtheria. The results only were presented, the figures and tables reserved for publication, as they could be best consulted in print.

Dr. Mayor read a very able and valuable essay on yellow fever, reporting his own experience while in charge of an outbreak of yellow fever in Newbern during the war. The following conclusions were reached: (1.) Yellow fever in the United States generally owes its origin and spread to importation. (2.) Yellow fever germ has a long vitality. (3.) A Southern climate season of great and protracted heat, soil saturated with products of animal and vegetable decomposition, aggravated by alternately being covered with water and exposed to the sun, neglect of sanitary measures, a certain state of the atmosphere, and unacclimated material are favorable conditions for yellow fever. (4.) Under these, at a high potency, yellow fever may arise *de novo*. (5.) The fever is not very likely to spread if those conditions be not met with. (6.) Sanitary regulations and strict quarantine are equally necessary.

The next paper was by Dr. R. S. Goodwin, of Thomaston, on Alcohol as a Therapeutic Agent. This enumerated briefly some of the most prominent physiological effects of alcohol on the human system in health, and defined the position which this important drug should take as a therapeutic agent. The paper did not, however, discuss chronic alcoholism, or the extensive catalogue of tissue designations which that subject introduces. Dr. Goodwin held that alcohol has in general received too much enthusiastic and over-wrought praise as a medicine, and that over-stimulation in disease is not a wise or philosophical mode of treatment. He claimed that alcohol should not be given at the same time as nutrients, nor as a febrifuge in febrile diseases, nor to women during the period of lactation. Alcohol, however, may well be employed as a means of sustaining the heart's action during alarming crises of disease, in the crises of fever, in recovery from shock, in the dangerous syncope following

violent hemorrhages, in antagonizing the powerfully depressing influence of morbid agents; also in varieties of nervous disorders, by virtue of its sedative influence upon the nervous centres, it may indeed sometimes be of more value than other remedies.

Dr. J. B. Kent, of Putnam, was not present to read his essay on Drainage in its Relation to Health, and it was referred to the publication committee for printing.

The next paper was on The Insane Colony at Gheel, by Dr. A. M. Shew, of the Asylum for the Insane at Middletown. The colony of Gheel, Belgium, dates back to the seventh century, and has now developed into a great system of government care of two thousand of the quiet chronic insane. An interesting account of the founding of the colony was given, and Dr. Shew then proceeded to describe the treatment. The patients are first received in the hospital, and are then sent out to live and labor with the families resident in the commune. The better class of patients are provided for in the village, but the others live with the peasants, and work in the fields with them. Every hamlet contained restraining appliances, but they are seldom used; excitable patients are at once transferred to Antwerp or Brussels. Dr. Shew, who visited the colony, was not pleased with the system, for the reasons that there was an absence of good medical care, a confusion of sexes, poorly ventilated houses, lack of wholesome diet, unlimited opportunity for the abuse of patients, and defective curative arrangements.

Prof. W. A. Hammond presented a paper in his usual vein on Insane Asylums, which was received without debate, and with the thanks of the society.

Dr. Carleton, of Norwich, exhibited a part of a leg bone, illustrating ununited fracture, and made an interesting statement of the case, which occurred in New London.

Dr. Frank Foster, of New York, read an instructive paper on the Use of Vaccine Matter taken from the Animal, and Dr. R. W. Matthewson, of Durham, a paper on Fibrous Tumor of Uterus removed by Laparotomy. This closed the readings, and the following voluntary communications were merely read by title, to save time, and ordered published with the proceedings:—

Official Alcohol as a Stimulant, by Dr. D. C. Leavenworth, of New Haven; Astringents in Diseases of the Conjunctiva, by Dr. F. M. Wilson, of Norwalk; Myopia, by Dr. W. H. Carmalt, of New Haven; Perityphlitis, by Dr. E. C. Kinney, of Norwich; Mortality of the Insane, by Dr. James B. Olmstead, of Middletown; Registration, by Dr. C. A. Lindsley, of New Haven; Spasmodic Spinal Paralysis, by Dr. J. H. Treat, of Terryville; Arsenic Eating, by Dr. P. A. Jewett, of New Haven; Treatment of the Insane, by Dr. Bacon, of Middletown.

The convention then, at 2.15 P. M., adjourned *sine die*. The next annual meeting will be held in New Haven. After the adjournment, the members of the convention, delegates from other societies, and invited guests partook of the annual dinner, which was served at Merrill's café. This was a very enjoyable affair. After the cloth had been removed, brief speeches were made by Governor Hubbard, Charles Dudley Warner, Dr. Hosmer, of the Massachusetts Medical Society, Dr. W. A. Hammond, of New York, Dr. Cutting, of Roxbury, Mass., and Colonel Greene, president of the Connecticut Medical

Life Insurance company. Letters from Dr. Fordyce Barker, of New York. J. G. Batterson, of Hartford. President Pynchon of Trinity College, and others were read, expressing their regret that they were not enabled to be present on the occasion. Dr. Wainwright also received, at too late an hour to present it, a letter from Governor Andrews, in which he stated that he could not be present, as he was preparing to start for Washington, D. C., on business connected with the gubernatorial office.

NEUBAUER AND VOGEL ON THE URINE.¹

THE number of editions through which this work has passed since its first publication in 1854 sufficiently attests its worth. The translation issued by the New Sydenham Society in 1863 has long been regarded as the best treatise (it is rather a collection of treatises) in the English language on the analysis of the urine and its semeiology. But the progress of chemical science and medical research have made a new translation highly desirable, and the present one comes to us with the addition of about a hundred pages, a complete index, and very numerous illustrations, beside microscopic plates of the urinary sediments, the spectrum of hæmatin, hæmoglobin, etc. An appendix contains rules for the analysis of urinary calculi and concretions. The translation and revision could not have fallen into hands better qualified for the work than those of Dr. Cutler and Professor Wood, and the volume is published in a very handsome form.

POTTER'S COMPENDIUM OF MEDICINE.²

THE "frequent and urgent demands" for another edition of this work appear to account for its presence. There is little to be said for or against compilations of this kind, except to express surprise at their number. The volume in question embodies the researches of many of the best authorities, and contains some good hints on "natural therapeutics."

TELLOR'S DISEASES OF LIVE STOCK.³

THIS useful volume gives the results of the author's study and observations of the diseases of domestic animals in such a form as to make it comprehensi-

¹ *A Guide to the Qualitative and Quantitative Analysis of the Urine.* By DR. C. NEUBAUER, Professor, etc., in Wiesbaden, and DR. J. VOGEL, Professor of Medicine in the University at Halle. Translated from the seventh enlarged and revised German edition by ELBRIDGE G. CUTLER, M. D., Physician to Out Patients at the Massachusetts General Hospital, Pathologist at the Boston City Hospital, etc. Revised by EDWARD S. WOOD, M. D., Professor of Chemistry in the Medical School of Harvard University. New York: William Wood & Co. 1879.

² *A Compendium of the Principles and Practice of Medicine for the Use of Students and Practitioners.* By STEPHEN H. POTTER, M. D. Second edition. Hamilton, Ohio. 1879.

³ *The Diseases of Live Stock, and their most Efficient Remedies.* Including Horses, Cattle, Sheep, and Swine. By LLOYD V. TELLOR, M. D. Philadelphia: D. G. Brinton. 1879.

ble and valuable to the farmer or breeder, while at the same time scientifically exact in matters of diagnosis and treatment, and especially full in the latter branch of the subject. The best authors in Great Britain have been freely used, Prof. William Williams, Finlay Dun, Gamgee, and others, beside those of our own country whose writings are of most value, Law, Townshend, etc. At a time like the present, when a knowledge of the best methods of controlling the epidemic diseases of cattle is of such vast importance to us financially, and animals are regarded also as being the possible source of certain human disorders, the study of their diseases assumes a new interest.

SANITARY IMPERFECTIONS OF PUBLIC BUILDINGS AT THE NATIONAL CAPITAL.

By Health Officer Townshend's report on the condition of public buildings at Washington, it would appear that some of them are reeking with dangerous miasma, due to imperfect ventilation. The Treasury Building in particular, covering an area of five hundred and twenty-eight by three hundred feet of ground, and sheltering two thousand persons, was in such foul condition that Mr. Townshend suffered violent attacks of headache even from the comparatively brief period which he was obliged to spend therein. The air in rooms on the fourth floor was unfit for breathing. The rough means adopted for ventilation, skylights, were found closed in every instance, because of the draughts they created when opened. There is abundance of air space, and this is the only salvation of the workmen, but there are no means of ventilation. In the binding-room bad smells were everywhere encountered. The dressing-rooms are "perfect pest-holes." Close attic-rooms, portioned off into stalls, are literally packed with the clothing of the employees. In endeavoring to demonstrate the situation, Mr. Townshend asks his readers to imagine the condition of a small room in which were hung the contents of the wash-baskets of two hundred families, — clothing which has absorbed bodily impurities for days and weeks. The only means of ventilation were skylights, again, and these remained closed. In addition to this condition of things the working clothing is deposited here during the night, and packages of cold food of nearly all the employees are likewise left in this apartment. The press-rooms, five in number, employ four hundred and forty-six persons. Impurities are generated by chemicals on hot plates, and other materials. Numerous gas jets and surrounding rooms add their impure air, no means being provided for ventilation. Moreover, each individual has but two hundred and seventeen cubic feet of air instead of five hundred, the minimum quantity sanctioned by authorities. The condition described is no fault of the officers in charge, for everywhere cleanliness was noticeable. Winder's Building and the Government Printing Office, are likewise at fault, though the former is in better condition as to its atmosphere than the other buildings. Mr. Townshend gives statistics of deaths in the District of Columbia, which clearly show that a much smaller death-rate would be the certain result of better ventilation in the public buildings, and for this he appeals in a manner which we trust will not be disregarded.

PROGRESS VERSUS CONSERVATISM.

WE are again in the midst of the season of the annual meetings of societies and associations, with their attendant addresses, papers, reviews of work done, and incitement to work to come.

We publish to-day a report of the late meeting of the Connecticut and Pennsylvania State Medical Societies, and are also fortunate enough to be able to give our readers an abstract of Dr. Garland's address before that of Massachusetts. The character of these meetings has been gradually changing for the better in the direction of seriousness; the social does not stifle the scientific element to the extent it once did. Papers of positive and permanent value are sometimes brought out by these occasions, and if in our own society they are not always listened to at the time, as Dr. Garland properly observes in his address, let us hope it is because they are done greater justice to by a subsequent perusal, an opportunity for which is offered in the columns of the JOURNAL and in the published Transactions of the society. But it cannot be denied that in general there is still room for improvement in the spirit and transactions of annual meetings, and this the annual addresses are much less likely now than formerly to allow us to forget. In this respect the fourth of July has almost ceased to affect us for evil. The shout of exultation has yielded to the warning monotone of the Greek chorus. The things left undone which ought to be done form a more grateful theme to the speaker and a more wholesome one for the societies than the glorification of the *res actæ*.

This tendency may, however, in its turn, be carried too far. Too much sackcloth causes an eczema, easy to acquire but hard to be rid of. Change and progress are not always synonymous, and the wisdom of a decade does not easily outweigh that of many centuries. In the abstract all allow that it is better to do old things well than to attempt many new ones. The admission of women to the medical department of an old university and to membership in the state society are matters in regard to which we have at different times had occasion to express no uncertain opinion, in acting upon which we think there is little danger of progressing too slowly. With patience let us strive yet a little to improve things as they are, even though we run the risk of sharing the fate of a professional colleague in Connecticut, who not only married a female physician, with homœopathic views, but consulted with her, and was expelled from the state society, all of which would not have happened had Harvard made suitable provision for her education.

MEDICAL NOTES.

—Through the liberality of Sir Richard Wallace, the British sick poor of Paris have been provided with a hospital, to be called the Hertford British Hospital. It is a fine building. The patients will be under the care of experienced physicians, a lady superintendent, and nurses, all of their own country.

—Eighty journals relating to the medical sciences are now published in Paris.

— A Western physician in attendance upon a confinement case which terminated in an obstinate and dangerous hemorrhage, after exhausting every means at hand to arrest the flow (he had neither ergot, nor ice, nor brandy, nor syringe, nor any form of hæmostatic), finally seized the poker, and heating it red hot cauterized the spinal region over a surface about four inches square. The uterus contracted at once, expelling the doctor's hand; the hemorrhage ceased, and did not reappear. The patient's life was barely saved. The doctor must have learned that during a confinement certain things should be at hand.

— Prof. S. P. Sadtler has been elected to the Philadelphia College of Pharmacy, *vice* Robert Bridges, M. D., resigned. — M. Bronardel replaces the late Professor Tardieu in the chair of legal medicine in Paris. — Dr. Gubler, professor of therapeutics in Paris, recently died in Toulon of the same malady — cancer of the stomach — which carried off Trousseau, his immediate predecessor but one in the same chair. — Dr. Clouston has been appointed lecturer on mental diseases in the University of Glasgow. This is a new lectureship. — Hebra was chosen president of the Imperial Society of Physicians at Vienna by a vote of 129 to 54.

NEW YORK.

— An unusually large number of changes in the corps of instructors in the various medical schools has taken place this year at the close of the spring session.

Dr. John T. Darby having resigned the chair of surgery in the medical department of the University of New York on account of ill health, and having been made professor emeritus, Dr. J. Williston Wright, professor of obstetrics in the same institution, has been elected professor of surgery; while Dr. William H. Polk, professor of materia medica and therapeutics in Bellevue Hospital Medical College, has received the appointment to the chair left vacant by Dr. Wright's resignation.

At the Bellevue College Dr. A. A. Smith, one of the lecturers on clinical medicine, has been appointed lecturer on materia medica and therapeutics in addition, and will in time, no doubt, receive the full professorship, as was formerly the case with Dr. Polk. Dr. Joseph W. Howe, for some time past professor of clinical surgery in the university school, has received the same appointment at Bellevue. This makes three professors with the same title there, the other two being Drs. Alexander B. Mott and Erskine Mason.

At the College of Physicians and Surgeons Dr. Thomas T. Sabine has been appointed professor of anatomy, Dr. H. B. Sands having resigned that position and been made adjunct professor of surgery. Dr. Matthew D. Mann has resigned the lectureship on clinical microscopy, in consequence of removal to Hartford, Conn. Just before his departure from the city a dinner at Delmonico's was tendered him by some of his medical friends, and quite a number of gentlemen were present to do honor to the guest of the evening, among them being Drs. Fordyce Barker, Charles C. Lee, Wm. H. Polk, Robert F. Weir, E. C. Seguin, James B. Reynolds, Joseph E. Janvrin, Wm. M. Chamberlain, Beverly Robinson, P. Brynberg Porter, Willard Parker, Jr., Paul F. Munde, and

Frank H. Bosworth. Dr. Mann will still retain his position as one of the editors of the *Archives of Medicine*.

— In his speech following the oration of Professor Gross, at the dedication of the monument to Dr. Ephraim McDowell, which took place at Danville, Ky., on the 14th of May, Dr. Sayre made a very happy hit, which created the most unbounded enthusiasm among the immense audience present, by an allusion to Dr. McDowell's patient. "Another fact strikes me very forcibly, Mr. President," said Dr. Sayre, "and that is the heroic character of the woman who permitted this experimental operation to be performed upon her. The women of Kentucky in that period of her early history were heroic and courageous, accustomed to brave the dangers of the tomahawk and the scalping-knife, and had more self-reliance and true heroism than are generally found in the more refined society of city life; and hence the courage of Mrs. Crawford, who, conscious that death was inevitable from the disease with which she suffered, so soon as this village doctor explained to her his plan of affording her relief, and convinced her judgment that it was possible, immediately replied, 'Doctor, I am ready for the operation; please proceed at once to perform it.' All honor to Mrs. Crawford! Let her name and that of Ephraim McDowell pass down in history together as the founders of ovariotomy."

— The ceremony of laying the corner-stone of the building of the New York Bible and Fruit Mission took place on the 27th of May, when the Rev. Dr. Howard Crosby, chancellor of the university, presided, and the Rev. Arthur Brooks, the Rev. Dr. Wm. M. Taylor, and Drs. C. R. Agnew and D. B. St. John Roosa participated in the exercises. The field of this charity, which has been in successful operation for a considerable period now, is to a great extent among the hospitals on Blackwell's Island, as well as those in the city proper, and the site that has been selected for the new edifice is at the foot of East Twenty-Sixth Street, opposite the entrance to Bellevue Hospital.

On the same day the annual reception of the country branch of the Nursery and Child's Hospital (the institution in whose behalf the grand charity ball is given each year at the Academy of Music) was held at West Brighton, Staten Island. There are very extensive grounds, which are in an elevated and healthful location, and the children, instead of being crowded together in one large building, are divided among a number of pleasant little cottages, which are models of tidiness, and which bear the names of various patrons of the charity. It is stated that the mortality at this branch establishment, which has now been in existence for nine years, is five and one half per cent., while that of the city department is fifteen per cent.

— Every week or two cases of small-pox are being discovered among the Bohemians occupying a certain tenement-house district in the eastern portion of the city. As a rule they are a very ignorant and degraded class, who seem to have an unconquerable prejudice against vaccination, and when small-pox appears among them they would rather die than be sent to a hospital where they would be well taken care of. They would also prefer to have their children perish rather than let them be taken there, and hence they always endeavor to elude the vigilance of the health authorities in every possible way. A short time ago it was reported to the board of health that a little Bohemian

boy, four years old, in this district, was suffering from small-pox, but when the disinfecting corps went to the house with an ambulance to remove him to the Riverside Hospital, it was discovered that the family had hastily removed, taking the sick child with them, and could not be found. About a week afterwards the board was notified that the family had returned to their former quarters, and that the boy was dead, when a coroner's inquest was held, and small-pox declared to be the cause of death. On the same day another child in the same neighborhood was reported to be sick with the disease, but when the officials reached the house it was found that this family also had fled.

CHICAGO.

— At the recent meeting of the Illinois State Medical Society, held at Lincoln, about eighty members were present. The meeting was harmonious, and business was hurried so that little discussion followed the reading of papers. About a dozen papers were read, which mainly embodied discussions of different topics and reports on the progress of certain departments, without recording anything particularly in the line of original research. Dr. Ephraim Ingals, of Chicago, was elected president.

— The faculty of the Chicago Medical College have recently voted to dispense hereafter with the summer course of lectures and recitations, and to extend the winter sessions to six months continuously, so that lectures will be given by the regular faculty from the first of October till the first of April, at which the graduations will take place.

— The question of the abuse of medical charities has begun to engage the attention of the profession in Chicago, as it has in the large cities of the East. Quite frequently complaints are heard from physicians that the college clinics and dispensary services take away their patrons who are well able to pay for both treatment and medicine.

The plan so far pursued in the largest of our general dispensaries, is to have patients, before being prescribed for, interrogated by a physician appointed for the purpose as to their ability to pay. If he thinks, after this examination, that any one is not a proper subject for dispensary treatment, such person is at once dismissed. Notwithstanding this care unworthy persons are often treated. Some people are fertile in resources of deception, and probably the most painstaking investigation of the circumstances of every person applying for free treatment would not succeed in rejecting all the undeserving ones.

The Illinois Charitable Eye and Ear Infirmary, which has a very large attendance upon its dispensary service, has recently put into practice a new means for the prevention of this abuse. Each patient applying for treatment, is now required to sign and swear to an affidavit that he is without means and utterly unable to pay. This scheme has been in operation hardly two months, but it is a sad comment on the sacredness with which an oath is held by civilized people with sore eyes and ears, that so far the plan seems to have increased the number of well-dressed people applying for treatment, and who find no difficulty in subscribing to the affidavit.

LETTER FROM VIENNA.

Clinics for Skin Diseases and Syphilis. — Billroth's Operations. — Clinical Advantages.

MR. EDITOR, — Vienna continues to be very attractive to students of medicine. Nearly all nations are represented here this winter, including a large number of English-speaking people, one hundred and eight of whom are Americans. The abundant material to which the student has full access, the large number and the excellence of the private courses, and the fact that they are so arranged that one can go from course to course all day long without losing time, are the wide-known attractions of the Vienna system.

Skin is decidedly the most fashionable study. In this branch of medicine there are six clinics daily. Professors Hebra, Neumann, and Kaposi are the best, the two last being the most popular among the Americans. Professor Kaposi has just come out with a new book, which is essentially the same as his lectures, and is remarkably clear and explicit, especially in regard to treatment. In the Hebra clinic one is struck with the rapidity and accuracy in diagnosis, and the simplicity and efficacy of the treatment. Hebra's spoon scrapers are extensively used in the treatment of epithelial cancers, lupus, moles, etc. With these instruments it is almost impossible to scrape away anything but the diseased tissue. Quite large epithelial cancers of the face are at first spooned out as much as possible, and later the returning disease is continually cauterized with nitrate of silver until the granulations are healthy. The resulting scars are often better than could have been expected from a plastic operation. Lupus is usually treated in much the same way, but when the disease is extensive or the patient especially sensitive, a strong pyrogallie-acid ointment is applied. At the end of two or three days the diseased parts are found to be necrosed, and soon slough out, leaving healthy skin on the sides and granulations beneath. The experiments with chrysarobin and pyrogallie acid in the treatment of psoriasis, herpes tonsurans, etc., are still continued, and have already been mentioned in your pages by Dr. Garland.

Syphilis seems to be well understood, and is excellently taught. The wards of Professor Sigmund are noticeable for their order, — the discipline of the nurses, who do all the dressings in both male and female wards, — and for the scrupulous personal cleanliness of the patients. Professor Sigmund himself has given only four lectures this winter. His assistant, Dr. Mrazk, gives a very good private course, where one can get a large experience in diagnosis and treatment in a short time. The well-known inunction cure is extensively used; also the subcutaneous injection of either peptone-quick-silver or the albuminate of quick-silver.

Professor Sigmund claims that wounds heal as well in syphilitic subjects as in non-syphilitic; accordingly, if a chancre is so situated under the prepuce that it cannot easily be taken care of, the patient is circumcised, and not only the prepuce but as much of the induration as is inconsistent with the symmetry of the organ is also removed. Circumcision is almost always done if the chancre is so situated that it can be removed with the prepuce. When the wound unites by first intention, which often happens, there is a clear gain of

two months' treatment of the chancre. These wounds usually do very well, except in cases where the chancre is gangrenous or diphtheritic.

Indolent suppurating buboes, syphilitic or otherwise, are not simply laid open, but all the tissue of the upper part is cut away down to the edge of the cavity, leaving a flat, open wound, and if the pus has burrowed under the glands they too are excised.

In surgery Professor Billroth attracts a large class, few of whom are Americans. He usually has something interesting. A few days ago he removed a larynx, and early in the winter he exhibited a man with a gastric fistula. We were somewhat surprised at the treatment of a hip dislocated on the dorsum ilii of four months' duration. He made no attempt to reduce it by manipulation on account of its long standing, but opened the joint by a long incision from the buttock down on to the back of the thigh; he then "cut all the muscles that prevented its reduction," and with the aid of several assistants brought the leg into position; then putting his hand into the wound brought out the head of the bone, which had been broken off by the reduction. His wards are remarkably clean and orderly. He usually operates under carbolic spray, and applies a very large dressing consisting of simple disinfected gauze containing no antiseptic whatever, over which is laid a large quantity of salicylic oakum or cotton, and outside of all a starch bandage, to render the part immovable and the dressing secure. The solutions for washing the wound, etc., are thymol. Heavy flaps in wounds are held in place by deep wires secured by lead balls.

In diseases of the urinary organs Dr. Ultzmann gives a good course. He has made a special study of the pathology and treatment of spermatorrhœa. Not to mention many smaller points, he says that in these cases the pars membranacea and prostatica is especially sensitive to the sound, and that the mucous membrane in that region is excessively hyperæmic as seen with the endoscope. Towards such a condition of the urethra and a relaxation of the ducts of the vesiculæ seminales he aims his local treatment, which consists for the most part in the application of a sound cooled by a double current of water and astringent suppositories introduced by Dittel's *porte-remède*. His results are often good. He points out the danger and demonstrates cases of male sterility after gonorrhœa caused by inflammatory obliteration of the ejaculatory ducts. He insists on the risk of entirely emptying a paralytic bladder at the first catheterization, on account of the hyperæmia *ex vacuo* which will follow in proportion to the thickness of the wall and to the amount of urine that constantly remained in the bladder. The immediate danger is a hæmorrhage into the kidneys or bladder. The worst result to be thought of is a fatal nephritis; the least is a more or less severe cystitis. His procedure is partly to empty the bladder at first, and to substitute a carbolic solution (one half per cent.) for the urine, gradually diminishing the amount until the bladder is empty, at the same time applying massage and electricity to the bladder region. He has just written a book on the examination of urine, which contains references to his well-known atlas of urinary sediments. This book explains many new and original points, and is of especial value to his pupils.

Midwifery is popular, because the students are allowed to examine all the

cases and to perform the smaller operations. The courses were all stopped for a time on account of the large number of cases of puerperal fever. The instructors make a great point of external examination and diagnosis. Last May Dr. Schauta, Professor Späth's assistant, having read of some cases of abortion accidentally caused by pilocarpine, resolved to test its power in that direction. Accordingly, he caused a woman to abort by subcutaneous injections of pilocarpine, and published the case. Since that time he has continued to experiment with the drug. Of late he has used it with good results in those cases in which ergot is contraindicated from the fact that the os is not fully dilated. These experiments will soon be published.

It has long been the custom here to cut and tie the cord as soon as it is pulseless. Within a few months a set of experiments have been instituted in Professor Späth's wards which show that the child, the cord not being cut, gains on an average about seventy grammes in weight between the time it is born and the time when the placenta comes away, and that a large proportion of this gain takes place after the cord has stopped beating. In the light of these experiments the cord is not tied until the placenta has come away, in order that the child may get the benefit of as much blood as possible.

In clinical medicine Professor Bamberger has of late become very popular, and he certainly impresses one as a man of great learning and ability. In the most difficult cases he runs rapidly through the symptoms, pathology, and treatment, discussing the latest theories in point, and giving the possibilities, probabilities, and certainties in regard to the diagnosis in a mechanically logical way seldom heard in medicine. The autopsies show him to be remarkably accurate. There is a good private course in his wards under his assistant, where students are allowed to examine the cases, and oftentimes the case to be shown by Bamberger in the next morning's clinic. In this department the instructors seem to be especially advanced in the interpretation of the auscultation of the heart, Professor Bamberger having written an excellent book on that subject some years ago. Here we have met a disease new to us, and said to be recognized only in Vienna, namely, workers in mother-of-pearl often appear here with periostitis or valvular disease of the heart, or both together. At the autopsies of these cases pearl powder is found deposited on the periosteum and bone; also on the affected valves of the heart.

Dr. Oster gives a course on the stomach and intestines. Here we have seen startling results from the mechanical washing out of the stomach and the irrigation of the intestines. It is astonishing to see with how little effort or discomfort the patients without assistance swallow the rubber tube through which the water is introduced.

Dr. Monti gives a very popular course on children. In pathological anatomy Dr. Chiari, Professor Hirschl's assistant, gives a very good course. Curious and rare specimens are constantly appearing out of the enormous mass daily exhibited. The results of operations are often instructive. Early in the winter, on exploring a wound of the neck, from which some glands had been removed, the carotid artery was found to have been nicked, the jugular vein to have been cut and tied, and the phrenic nerve tied. It is an interesting fact that this patient had experienced no special difficulty in breathing since the operation. Within a few weeks three cases have appeared, the re-

sults of extirpations of the uterus ; in each case a ureter was cut, and in two of the cases the ureters were cut and tied.

Dr. Chiari has of late examined eight hundred rectums with reference to the pathology of anal fistulæ. He has noticed that Morgagni's glands, situated just inside the anus, where the mucous membrane begins to take on the characteristics of true skin, although very shallow in young individuals, are often quite deep and large in old people, and that this appearance is often increased by the columnæ Morgagnii, the parts between the glands being thickened by hæmorrhoidal veins. He has succeeded in obtaining a series of specimens which show these glands in a great variety of conditions and sizes,—some shallow, some quite deep, some very deep and extending through the sphincter ani. On the other hand, he has found mucous membrane lining parts of the tracts of complete fistulæ. His idea is that when the rectum is full of fæces and the sphincter contracts, these glands, as parts of less resistance, are slowly pushed out, dragging the mucous membrane behind ; that once having pushed through the sphincter ani so that the faecal matter cannot return to the bowel, the stagnating masses excite ulceration, and come gradually, though not always, directly to the surface. He thinks that the fact that the surgeon always looks for the opening of the fistula just inside the anus is a support to his theory. Whether this theory be accepted or not, perhaps the fact that some fistulous tracts are lined in part by mucous membrane will explain their obstinacy in healing, and suggest the inadequacy of treatment by simply cutting the outer wall.

J. W. E.

SHORT COMMUNICATIONS.

CONSANGUINEOUS MARRIAGES.

MR. EDITOR,—At a recent meeting of the New England Psychological Society the subject for discussion was Consanguineous Marriages, with Special Reference to Progeny. With a desire to obtain some original data for use at that meeting I corresponded with the members of the North Middlesex District Medical Society, asking (1) how many marriages of near relatives had come within their knowledge, and (2) how many of these had resulted in offspring of unsound mind.

In reply I received accounts of twenty-five such marriages, resulting in the birth of one hundred and seven children. Of these, ninety-two were sane, four insane, and eleven idiotic. Of the fifteen whose minds were unsound nine became so from known causes other than the consanguinity of parents. Only six, then, of the one hundred and seven children could have been made insane by the near relationship of their parents, and even in these cases there may have been other causes.

This I am aware is but a trivial contribution to this subject, but it tends to show that the danger of such marriages is often exaggerated.

W. H. LATHROP.

TEWKSBURY, MASS., April 19, 1879.

CONTAGIA.

MR. EDITOR,—Will Dr. Alexander R. Becker, through the pages of the JOURNAL, kindly explain how it is that the "contagia," which he describes (page 673 of the JOURNAL of the 15th inst.) as greedily consuming the enormous quantities of water taken, but for the most part not eliminated, by the fever patient, fail to add to the volume and weight of his body?

Very respectfully,

IRVING W. SMITH.

IN-GROWN TOE NAIL.

MR. EDITOR, — In the issue of May 8, 1879, Dr. George W. Gay has an article upon The Treatment of In-Grown Toe Nail, in which he discusses Dr. Hunter's article in the *Philadelphia Times* upon the same subject, and then speaks of what is known in Boston as Dr. Cotting's operation, which I see by the foot-note was first published in the *JOURNAL*, January, 1877.¹

All I wish to say in regard to the matter is that I devised and performed the operation as described by Dr. Gay, either in the winter of 1853-4 or 1854-5, while a resident of Holliston, Mass., first upon the person of my brother, William M. McCluer, now of Minnesota, and a few days later upon a young man by the name of Whiting, son of Harrison Whiting, Holliston, Mass. I made the same operation a number of times upon soldiers during the late war, and many times since in this city, but did not publish the operation until November, 1877.¹

I write not only to commend the operation as simple and efficient, and without the liability to return of disease, but also to make it apparent that the operation has been known and practiced in your locality for a much longer period than would appear from Dr. Gay's article.

BENJAMIN MCCLUER.

DUBUQUE, IOWA.

REPORTED MORTALITY FOR THE WEEK ENDING MAY 31, 1879.

Cities.	Popula- tion estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from				
				The Pri- nci- pal "Zymo- tic" Diseases.	Pneumo- nia.	Scarlet Fe- ver.	Diphtheria and Group.	Diarrhoeal Diseases.
New York.....	1,085,000	445	21.39	18.43	7.19	6.97	3.37	2.69
Philadelphia.....	—	231	—	13.86	5.63	2.59	3.42	2.16
Brooklyn.....	564,400	186	17.18	16.13	8.06	3.23	7.53	2.15
Chicago.....	—	124	—	16.13	5.65	4.84	4.84	1.61
St. Louis.....	—	103	—	15.53	1.94	—	—	7.76
Baltimore.....	365,000	91	13.00	20.88	4.39	5.49	7.69	5.49
Boston.....	360,000	116	16.80	12.07	6.03	1.72	4.31	2.59
Cincinnati.....	—	95	—	24.21	7.37	14.74	1.05	4.21
District of Columbia.....	160,000	56	18.25	14.29	1.79	—	1.79	5.36
Cleveland.....	—	62	—	25.81	6.45	6.45	4.84	—
Pittsburgh.....	—	42	—	26.19	9.52	2.38	14.29	2.38
Buffalo.....	—	41	—	46.34	4.88	9.76	12.19	9.76
Milwaukee.....	—	—	—	—	—	—	—	—
Providence.....	101,000	28	14.46	28.57	3.57	14.28	7.64	—
New Haven.....	60,000	13	11.30	7.69	7.69	—	—	—
Charleston.....	57,000	24	21.95	16.67	4.17	—	4.17	20.83
Nashville.....	27,000	9	17.38	22.22	—	—	—	11.11
Lowell.....	53,300	18	17.60	16.67	11.11	5.55	11.11	—
Worcester.....	52,500	17	16.88	29.41	5.88	—	17.69	—
Cambridge.....	51,400	16	16.22	—	6.25	—	—	—
Fall River.....	48,500	17	18.28	5.88	—	—	—	—
Lawrence.....	38,200	7	9.65	—	14.29	—	—	—
Lynn.....	34,000	18	27.61	27.78	11.11	16.67	—	—
Springfield.....	31,500	12	19.86	41.67	—	33.33	8.33	—
New Bedford.....	27,000	9	17.38	22.22	—	—	22.22	—
Salem.....	26,400	9	17.78	33.33	11.11	—	11.11	—
Somerville.....	25,500	6	13.40	16.67	—	—	—	16.67
Chelsea.....	24,900	4	10.03	25.00	—	—	25.00	—
Taunton.....	22,200	5	12.91	—	—	—	—	—
Hartford.....	18,200	4	25.79	44.44	—	44.44	—	—
Cromwell.....	17,100	10	30.49	10.00	—	10.00	—	—
Newton.....	17,100	4	12.29	—	—	—	—	—
Haverhill.....	15,500	3	10.22	33.33	33.33	—	33.33	—
Newburyport.....	15,500	2	7.72	50.00	—	—	—	—
Fitchburg.....	12,600	2	8.31	—	—	—	—	—

¹ Not reported.

Eighteen hundred and thirty four deaths are reported: 340 from the principal "zymotic" disease, 321 from consumption, 110 from pneumonia, 56 from scarlet fever, 58 from diphtheria, 58 from diarrhoeal diseases, 44 from bronchitis, 27 from typhoid fever, 27 from croup.

¹ Philadelphia Medical and Surgical Reporter, vol. xix., No. 27.

24 from whooping-cough, 20 from cerebro-spinal meningitis, 13 from measles, eight from malarial and remittent fevers, seven from erysipelas, one each from pleurisy and small-pox. Scarlet fever, diphtheria, and croup have varied a little each week for the past month, but without any great change. From cerebro-spinal meningitis there has been a progressively increasing mortality; from erysipelas decreasing. The deaths from measles are double the number for the previous week, but not so many as two weeks ago. In typhoid fever there is an increase over the previous two weeks, making the deaths nearly the same as three weeks ago. Whooping-cough has been increasing for the past three weeks. The deaths from "zymotic" and chronic pulmonary diseases are more than for any other of the past four weeks; from acute pulmonary diseases less. The total mortality is somewhat more than for the previous week. From *bronchitis*, 18 deaths were reported in New York, nine in Brooklyn, four in Boston, two in Philadelphia, Chicago, and Fall River, one in Cincinnati, New Haven, Nashville, Cambridge, Salem, and Holyoke. From *typhoid fever*, seven in Philadelphia, five in Chicago, three in Boston, two in New York and Providence, one in St. Louis, Cincinnati, District of Columbia, Cleveland, Buffalo, New Haven, Nashville, and Fall River. From *whooping-cough*, eight in New York, three in Philadelphia, Brooklyn, St. Louis, and Cleveland, one in Baltimore, Boston, Cincinnati, and Newburyport. From *cerebro-spinal meningitis*, six in New York, three in Buffalo, two in Philadelphia, Cincinnati, Lynn, and Salem, one in Chicago, St. Louis, and Worcester. From *measles*, five in Cleveland, three in New York and Pittsburgh, one in District of Columbia and Worcester. From *erysipelas*, two in Buffalo, one in New York, Philadelphia, Brooklyn, St. Louis, and District of Columbia. From *malarial, remittent*, and *typho-malarial* fevers, three in New York, two in Brooklyn and St. Louis, one in District of Columbia. From *bilious fever*, one in Baltimore. From *small-pox*, one in New York.

The weather was generally reported fine, clear, unusually hot for the first part of the week, and on the lakes changeable, the meteorological record for the week in Boston (latitude 42° 21', longitude 71° 4') being as follows:—

Date.	Barom-eter.		Thermom-eter.		Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.			Rainfall.	
	Mean.	Max. Min.	Mean.	Max. Min.														Duration.	Amount in Inches.
					A.	M.	P.	M.	A.	M.	P.	A.	M.	P.	A.	M.	P.		
May 25	29.791	73 47	48	45	56	50	NW	S	SW	6	6	4	1	F	C	—	—	—	—
" 26	30.040	74 48	41	12	36	NW	NW	3	3	1	0	0	0	0	0	0	0	—	—
" 27	30.219	74 44	32	19	73	42	W	S	S	8	11	6	0	F	O	—	—	.01	—
" 28	30.288	62 57	56	56	55	67	N	SE	NW	4	7	8	0	0	S	—	—	—	—
" 29	30.111	67 75	67	48	46	72	SE	S	S	12	12	12	F	F	F	—	—	—	—
" 30	30.086	62 89	56	54	48	84	SW	SW	SW	10	18	12	F	F	F	—	—	—	—
" 31	29.968	75 80	67	69	67	84	SW	SW	SW	14	12	10	0	F	F	—	—	—	—
Week.	30.045	63 44	53	53	53	53	SW	SW	SW	10	12	10	0	F	F	—	—	1.75	.01

1 O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

For the week ending May 10th, in 149 German cities and towns, with an estimated population of 7,573,964, the death-rate was 28.3, an increase of 1.2 from the previous week. Pulmonary diseases, typhus fever, and relapsing fever were somewhat more prevalent; diphtheria, whooping-cough, and diarrheal diseases were very fatal; measles, scarlet fever, and typhoid fever had diminished in fatality. Four thousand one hundred and fifteen deaths were reported: 643 from pulmonary consumption, 514 from acute diseases of the respiratory organs, 217 from diarrheal diseases, 140 from diphtheria and croup, 55 from whooping-cough, 48 from typhoid fever, 46 from scarlet fever, 33 from measles, 25 from puerperal fever, 10 from typhus fever, two from small-pox (Ratibor and Cologne), one from hydrophobia (Posen). The death-rates ranged from 15.6 in Carlsruhe to 42.7 in Posen. Königsberg 28.9; Dantzic 27.6; Breslau 34.1; Munich, 42.3; Dresden 23.0; Cassel 25.7; Berlin 26.2; Leipzig 23.6; Hamburg 30.1; Hanover 24.4; Bremen 19.6; Cologne 31.9; Frankfort-on-the-Main 31.8; Strasburg 29.8; Darmstadt 17.9. Also for the same week the rates were for Vienna 33.1; Prague 47.0; Geneva 36.7; Basel 34.1; Paris 29.4; Christiania 16.1.

For the week ending May 17th, in the 20 English cities and towns having an estimated population of 7,383,999, the death-rate was 22.4, the same as for the previous week; the mortality from pulmonary diseases, measles, and whooping cough continued to decline: there was some increase in fever, diphtheria, and scarlet fever, not great. Three thousand one hundred and seventy-four deaths were reported: 355 from diseases of the respiratory organs, 106 from whooping-cough, 85 from scarlet fever, 72 from measles, 43 from fever, 29 from diarrhoea, 17 from diphtheria, six from small-pox (in London). The death-rates ranged from 15 in Portsmouth to 26.3 in Newcastle-upon-Tyne; 21.1 London; 15.8 Brighton; 22.9 Bristol; 21.5 Birmingham; 23.3 Liverpool; 26.2 Manchester. In Edinburgh the death-rate was 19, in Glasgow 22, in Dublin 33 (small-pox about the same).

Fevers are less fatal in Turkey and Russia. Several of the governments of Europe have removed all restrictions upon trade with the places in Europe where the plague prevailed or was suspected of possible occurrence.

THE following extract of an act of Congress approved June 2, 1879, entitled An Act to Prevent the Introduction of Contagious or Infectious Diseases into the United States, is hereby published for the information of all concerned:—

“SEC. 9. So much of the Act entitled An Act to Prevent the Introduction of Contagious or Infectious Diseases into the United States, approved April 29, 1878, as requires consular officers or other representatives of the United States at foreign ports to report the sanitary condition of and the departure of vessels from such ports to the supervising surgeon-general of the marine hospital service; and so much of said act as requires the surgeon-general of the marine hospital service to frame rules and regulations, and to execute said act, and to give notice to federal and state officers of the approach of infected vessels, and furnish said officers with weekly abstracts of consular sanitary reports, and all other acts and parts of acts inconsistent with the provisions of this act, be, and the same are hereby, repealed.” By direction of the secretary of the treasury, J. B. HAMILTON,
Surgeon-General United States Marine Hospital Service.

THE AMERICAN NEUROLOGICAL ASSOCIATION will hold its fifth annual meeting in New York city on Wednesday, June 18th, which will continue three days.

BOOKS AND PAMPHLETS RECEIVED. — *Fistula, Hemorrhoids, Painful Ulcer, Stricture, Prolapsus, and other Diseases of the Rectum, their Diagnosis and Treatment.* By William Allingham. Third edition, partly rewritten. Philadelphia: Lindsay and Blakiston. 1879.

Dr. G. Beck's *Therapeutischer Almanach*. Bern. 1879.

A Compendium of the Principles and Practice of Medicine. For the Use of Students and Practitioners. By Stephen H. Potter, M. D. Second Edition. Hamilton, Ohio. 1879.

Annual Address on the Relation of Neurasthenia to Diseases of the Womb. By William Goodell, M. A., M. D. Philadelphia, Pa. Reprint from Vol. III. *Gynæcological Transactions*. 1879.

Transactions of the American Gynæcological Society. Vol. III., for the Year 1878. Boston: Houghton, Osgood & Co. The Riverside Press, Cambridge. 1879.

Lectures on Electricity in its Relations to Medicine and Surgery. By A. D. Rockwell, A. M., M. D. New York: William Wood & Co. 1879.

Handbook of Diagnosis and Treatment of Diseases of the Throat and Nasal Cavities. By Carl Seiler, M. D. With Thirty-Five Illustrations. Philadelphia: Henry C. Lea. 1879.

The Channing Home. Report No. 11. 1879.

Thirty-Third Annual Announcement of Starling Medical College, Columbus, Ohio.

Inhalations in the Treatment of Pulmonary Diseases. By F. H. Davis, M. D. Chicago, Ill. 1879.

Photographic Illustrations of Skin Diseases. By George Henry Fox, A. M., M. D. Forty-Eight Colored Plates taken from Life. Parts 1 and 2. New York: E. B. Treat. (From Shumway & Co., 21 Bromfield Street, Boston.)

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THE EXTIRPATION OF THE OVARIES FOR SOME OF THE DISORDERS OF MENSTRUAL LIFE.¹

BY WILLIAM GOODRILL, A. M., M. D.,

Clinical Professor of Diseases of Women, University of Pennsylvania, etc.

CASE I. My first case was that of a maiden lady, aged thirty-three, who had for many years been a great sufferer. She was never wholly free from pain, but one week before each monthly period this pain began to increase, and steadily grew worse, until it became unbearable. The menstrual flux then appeared, but with no abatement of her sufferings. It lasted fully a week, and was always profuse, sometimes alarmingly so. Then followed a week of gradual lessening of all these distressing symptoms. Thus three weeks out of every four were virtually spent by her in bed, and the remaining time was not long enough for her to recruit her powers and husband her strength for the next encounter with her monthly foe.

Worn out by loss of blood and by her acute pains, which were deemed nervous, she consulted Dr. S. Weir Mitchell. He at once discovered an abdominal tumor, and asked me to see her.

The lady was pale, thin, and bloodless, with a face furrowed by acute suffering. I found a vaginal cervix lodged on the symphysis pubis, and a sharply anteфлекed womb imbedded in the hilus of a large and kidney-shaped fibroid tumor. Although the sound gave a measurement of but three inches, the tumor dipped down to the bottom of Douglas's pouch, and reached up to a point two fingers' breadth above the navel and to its left. The fibroid was plainly subperitoneal, and not amenable to treatment per vaginam.

Thereafter Dr. Mitchell and I met frequently, and did all that we could to alleviate the pain and lessen the bleeding, but without any success whatever. She grew rapidly worse, and it was finally decided to extirpate the womb. While waiting for the hot weather to pass by, I came across a successful case of the same nature cured by Trenholme, of Montreal, by the removal of both ovaries. We therefore determined to try this operation before resorting to the major one, and she gave us no peace until the day was fixed upon. Accordingly, on October 4,

¹ Abstract of a paper read before the Pennsylvania State Medical Society.

1877, with the aid of Drs. S. Weir Mitchell, John Ashhurst, Charles T. Hunter, B. F. Baer, and W. H. Heath, I removed both ovaries by the vaginal incision. The hæmorrhage was very trifling during the operation; no vessel needed tying, and not a suture was put into the vaginal wound. The right ovary looked healthy, but the left contained a small cyst.

The immediate effect on the lady was most remarkable. From that day she lost all those pains and aches which had imbittered her menstrual and intermenstrual life, and they have never returned. The large fibroid tumor also rapidly lessened in size, until, six months later, it was no larger than a horse-chestnut. At that size it has since remained, but is giving her no trouble whatever. From being a bedridden invalid she now takes charge of her mother's house, and is able to do many other things beside. Last evening, Dr. John Ashhurst casually informed me that, with a friend of his, she had a few days ago walked four miles into the country after wild flowers. Her menses have never returned, but their absence has not made any appreciable effect upon her appearance or upon her character. She is just the same in these respects as she was before the operation.

In addition to this case I have collected in my work on Gynæcology¹ eleven others, making twelve in all, in which the operation of spaying was performed for fibroid tumor of the womb. Of these, three proved fatal, but in each of them the ovaries were removed by the more hazardous abdominal incision. In one, operated on by Hegar, of Freiburg, the tumor grew smaller for five months, and the menstrual flux was absent; then a hæmorrhage took place, and an increase in the growth was observed, but unfortunately the patient was soon after lost sight of. In the remaining eight, including my own case, convalescence was uninterrupted, the menopause was established, the tumor became smaller, and the women were virtually cured.

Now I do not by any manner of means propose the removal of the ovaries as the sole means of curing a troublesome fibroid tumor of the womb. Whenever one so bulges into the cavity of the womb as to be reachable it ought to be enucleated. In this manner I have removed several interstitial fibroid tumors, one of them weighing twenty ounces. Then again we must not forget the incision of the capsule, the hypodermic use of ergotine, and other means devised for the treatment of these growths. But whenever the tumor is irremediable by such means I believe spaying to be a perfectly legitimate operation, and one which will be found very successful.

CASE II. This was an unmarried lady of twenty-seven, who had great hæmorrhage at her menstrual periods and exquisite suffering, not only at these times, but for a week before and after. Her physician

¹ Lessons in Gynæcology, page 275.

called me in to see her several times, but I was powerless to do any good whatever. Her troubles seemed to start from turgid and neuralgic ovaries, for the womb showed no lesion whatever, and the pains radiated from each ovarian region. She had violent headaches, great emaciation, — weighing sixty-seven pounds only, — and exhibited mental disturbances which threatened insanity. I finally recommended the rest cure, but this did her very little good, although she was under the skillful supervision of Dr. S. Weir Mitchell, and fattened up to eighty-three pounds. It was the worst case but one of pernicious menstruation that I have ever seen. Finally, after due deliberation, the removal of the ovaries was decided upon by us, and proposed to her. She at once consented, and I performed the operation *per vaginam*, being aided by her physician and by two other medical friends.

One stalk was tied with silk, the other with gut; this latter broke, and that stalk was then crushed off with the *écraseur*. Her recovery was a slow one, being retarded by a small pelvic abscess, which burst through the incision, and discharged the knot of the silk ligature. Menstruation did not return, and she became wonderfully better, so much so as to astonish her friends, who were all ignorant of the nature of the operation. The secret has been well kept; her father, the other members of her family, and the servants in the house are to this day unaware of what took place. Beside her mother and the physicians present no other soul knows that she is without ovaries. Nor is the slightest change of voice, of appearance, or of character perceptible. She mingles in society, and is just as womanly and as womanish as she was before the operation. She has simply reached the climacteric somewhat abruptly, as Kœberlé calls it. Not long ago her physician informed me that “she deemed herself perfectly well, and had told him that he need never call again as a physician, but as a friend.” She has a large circle of friends, many of whom have complimented me on the successful issue of my treatment, and have asked questions so hard to parry that I trust the recording angel has dropped a tear over each entry of my answers.

CASE III. This was a married lady, aged thirty-seven, and the mother of three children, the youngest ten years old. She must have sustained some injury from the birth of this last child, for she never conceived again, and was never well afterwards. Agonizing pelvic pains at first ushered in the monthly periods, then kept up for some time afterwards, and finally never left her. She now became bedridden and an opium eater. Early in May, 1878, I was called in to see her by her physician, Dr. A. C. Deakyné, who had faithfully attended her for two years, and had exhausted every means known to medicine. A more wretched creature I never saw. She was reduced to skin and bones, and bore on her face the lines and furrows of the keenest anguish. The womb was in its place, and presented no other lesion than a slight

enlargement. After a careful examination I was forced to the conviction that it was a typical case of neuralgic ovaries, with nerve storms radiating from them and breaking upon every other organ in the body. It was by far the worst case of pernicious menstruation that I have ever seen. Dr. Deakyne himself had come to the conclusion that no relief short of spaying would do her good, and he had therefore called me in. I agreed with him in this opinion, and we received the hearty concurrence of the poor woman, who was willing to face death in any shape for a promise of relief. The operation was performed on May 26th, just after she had passed through a catamenial tempest of unusual severity. Drs. Deakyne, T. M. Drysdale, E. L. Duer, L. A. Dix, and Henry F. Baxter kindly helped me on the occasion. There was no difficulty whatever in catching the ovaries through the vaginal incision and in removing them, but the hæmorrhage was freer than usual. Both ovaries seemed congested, and one bore a beautiful false corpus luteum. For four and twenty hours great relief was experienced, and everything looked promising, but on the next day a slight peritonitis set in. It was limited to the pelvic regions, but having no strength she died on the fourth day.

While deeply deploring the result, I do not look back upon this case with any misgivings as to the propriety of the course pursued, for I do not believe that anything short of the extirpation of her ovaries would have cured her. But I do not wish to be understood as recommending this operation for every case of ovaralgia, for I have seen too many cases cured by rest, by a milk diet, by massage, and by electricity, which is the treatment that I would recommend as a very efficacious one in the milder forms of this very stubborn disease.

CASE IV. This was a married lady, thirty-eight years old, whose brain gave way from over-anxiety and from over-nursing a sick child during the summer of 1875. The first token of insanity was night terrors, which began to afflict her for two or three days before the appearance of her catamenia. These steadily grew worse until I saw her in September, 1878. At that time she presented the following symptoms: Several days before the appearance of her menses, to use the language of her husband, who is a clergyman, "hallucinations on every subject take complete possession of her, and she becomes so violent as to need locking up." These attacks last during the continuance of the menses and for a week afterwards. The remaining part of the inter-menstrual period, which lasts from a week to ten days, "she eats and sleeps enormously, like a plowman," and exhibits mere traces of her hallucinations. She has been an inmate of several insane asylums without benefit. Two distinguished alienists, however, held out hopes to her husband that with the change of life reason would return. Deeply impressed with this opinion, and with the conviction that the

climacteric could alone cure his wife, and having heard of one my cases of spaying, he brought his wife to me for the sole purpose, if I deemed it best, to bring on an artificial menopause.

I found a congested and a hypertrophied womb, measuring 3.5 inches, and the left ovarian region exquisitely tender; the ovaries, however, could not be outlined. These were all the discoverable lesions, but in view of the history of the case, and of the opinion of the two experts who had had her for several months under their charge, I consented to remove her ovaries.

This was accordingly done by a vaginal incision on November 23d, and I was aided in the operation by Dr. Joseph Parrish, Dr. Charles H. Thomas, Dr. B. F. Baer, and Dr. Angle. She did not have a single bad symptom following the operation, although she twice jumped out of bed, and had to be forcibly put back and held down. Her pulse and temperature never rose above the normal. On the eighth day, by dint of a little coaxing, I succeeded in persuading her to let me remove a single stitch that had been put in. After that she could not be kept in bed without undue violence, and I thought it best, as the less of the two evils, to let her get up. No harm whatever followed, but I am sorry to say that, although she has not to my knowledge menstruated since, her mental condition has not been improved.

Now, although this case was a failure, I cannot but think that the principles which governed my conduct are sound ones, and should I meet with a case of insanity limited to the catamenial periods I should not hesitate to remove the ovaries. So impressed, indeed, am I with the soundness of these views that it is my intention, in the course of a few days, to extirpate the ovaries from an epileptic young lady, whose first fit began at her first menstruation, and whose present fits pivot around the monthly flux as a centre.

How shall the operation of spaying be performed? By the abdominal incision the ovaries can always be removed; by the vaginal one, very generally. Each operation has its advocates, but I am a warm upholder of the latter, because it is the safer. I have elsewhere¹ collected and tabulated fifty-one cases of spaying, with fifteen deaths. In thirty-one cases the abdominal incision was employed, and was followed by eleven deaths; while out of twenty cases in which the ovaries were taken away through a vaginal incision, only four died. This smaller rate of mortality is attributable to the greatly lessened exposure of the peritonæum, and to the dependent drainage opening. By this operation, however, the ovaries cannot always be caught and removed. They may be carried up by a large fibroid tumor and lie beyond the reach of the finger, or they may be, as Sims² and Thomas³ found them, so

¹ Goodell's *Lessons in Gynecology*, page 277.

² *Transactions American Gynecological Society*, vol. i., page 352.

³ *British Medical Journal*, December, 1877.

bound down by firm adhesions as not to be dislodged. In my four cases I had no difficulty whatever in reaching the ovaries and in removing them per vaginam. So impressed, indeed, am I with the greater safety of this mode of operation that I shall always attempt it. Should it fail, the abdomen can afterwards be opened, and the abandoned vaginal incision be utilized, if needful, as a drainage opening. The abdominal operation should be performed under the spray, and every detail of Lister's should be scrupulously carried out. Of the great value of antiseptic surgery in cases needing the exposure of the peritoneal cavity there can be no question whatever. The wonderful successes of Keith and Thornton amply prove it. Not quite three weeks ago I removed, from a lady sent to me by Dr. A. H. Sheaffer, of Lewistown, a large fibro-cystic tumor of the womb through an incision extending from near the ensiform cartilage to the symphysis pubis, and needing twenty-three sutures to close. The tumor had no stalk, but springing directly from the womb had to be enucleated from its peritoneal capsule. Yet, thanks to the spray, the patient recovered without a single bad symptom, and with less constitutional disturbance than that which usually follows the removal of a small surface growth like an adipose tumor. In the vaginal operation I have not yet tried the spray, but I intend to do so, although Sims found that the constricting action of the carbolic acid incommodiously narrowed the calibre of the vagina.

If the abdominal incision be performed, the incision should extend from near the navel to a point as low down as is compatible with the safety of the bladder, and then each stalk should be tied with gut, and dropped within the cavity. In the vaginal operation, the patient should be placed on her back, and not on her side. I am satisfied that it was the lateral posture that helped to kill my third patient, for as soon as the peritonæum was opened the air rushed out and in during every inspiration and expiration,—an untoward circumstance which cannot happen in the dorsal posture. A duck-bill speculum is introduced, and the perinæum pulled downwards. The post-cervical mucous membrane is next caught up by a uterine tenaculum, and it and the underlying peritonæum are snipped open for about an inch with a pair of scissors, of which I have found Kuchenmeister's to be the best. The index finger of the left hand is then passed in, the womb pushed down from above by the right hand, and each ovary brought down to the incision by the finger hooked into the sling made by the oviduct. The ovary is now seized by a fenestrated forceps and brought into the vagina. The stalk is transfixed by passing a needle, armed with a double gut thread, between the ovarian ligament and the oviduct, and each half securely tied. The ovary is then removed, the ligatures cut off at the knot, and the stumps returned into the pelvic cavity. In order to hinder the chance of the protrusion of a bowel-loop, I have, in three instances,

closed the vaginal opening with one suture, and that either of silver or of gut; but in the case with the incision left unclosed no protrusion took place. The hæmorrhage during the operation was in only one of my cases quite free, but it was venous, and needed no ligature.

There is one drawback to this operation. For some reason the removal of both ovaries does not always bring about the cessation of the menses. From a careful collection of all the published cases of double ovariectomy occurring during menstrual life, I find that out of one hundred and thirty-two cases there were fifteen in which regular monthly fluxes kept on, and nine in which such fluxes were either irregular or lessened in amount. The cause of this unexpected continuance of the menses has been attributed by Kœberlé to a portion of ovarian stroma unwittingly left behind, but I think it is often owing to the existence of a third or accessory ovary. Kocks found a third ovary attached to a womb removed by him for cancer.¹ The specimen was exhibited at the Medical Congress held last year at Cassel, and verified by Dr. A. R. Simpson, who happened to be present.² Puech has collected several such cases,³ while the lamented Beigel, in three hundred and fifty post-mortem examinations, found eight women with a third or accessory ovary, containing true ovarian stroma.⁴ These accessory ovaries range in size from a hemp-seed to that of a cherry, and are usually attached by a slender stalk. They very generally lie on the boundary line separating the peritonæum from the serous covering of the ovary. Beigel encountered three attached to one ovary, and Waldeyer as many as six. "On microscopic examination they were found to consist of normal ovarian tissues, and to contain Graafian follicles in every degree of development, as well as relics of corpora lutea and follicles which had dwindled without rupturing. The author concludes that both conception and also the pathological changes of normal ovaries may originate in these bodies. They may also have a bearing on the recurrence of menstruation after the complete removal of the ovaries." I cannot but think that this is the explanation of Atlee's two remarkable cases, in each of which one ovary having been removed, the other became so diseased as to need repeatedappings, and yet each woman not only menstruated, but gave birth to a child.⁵

Does the extirpation of the ovaries after puberty unsex a woman? So far as can be ascertained it does not; at least no more than castration after puberty unsexes a man. In the one the ability to inseminate is lost, in the other, the capability of being inseminated but in both

¹ Centralblatt für Chirurgie, No. 49, page 839.

² Edinburgh Medical Journal, January, 1879, page 512.

³ Annales de Gynécologie, January, 1879, page 78.

⁴ Obstetric Journal of Great Britain, July, 1877, page 286, from Wiener medizinische Wochenschrift, May 26, 1877.

⁵ Ovarian Tumors, pages 38 and 39.

the sexual feelings remain pretty much the same. Kœberlé, who has a large experience in double ovariectomies, avers that "the extirpation of both ovaries does not produce a single marked change in the general condition of the woman. She has simply attained the menopause abruptly." This opinion tallies with that expressed by Wells, Hegar, Peaslee, and Atlee, and is certainly confirmed by the history of my own patients, who are not conscious of any physical or psychological changes whatever.

The operation of spaying is yet in its infancy, and time is needed to develop its resources. But I cannot help feeling that in carefully selected cases it will prove the sole means for curing many mental and physical disorders of menstrual life which have hitherto baffled our science, and are a standing opprobrium to our profession.

DYSTOCIA FROM DORSAL DISPLACEMENT OF THE ARM.

BY C. H. BROCKWAY, M. D., LYNN, MASS.

THE above cause of obstructed labor may not be an uncommon one, but it is difficult of diagnosis, and has been seldom described by accoucheurs.

Simpson observed it, and advised the difficult manœuvre of bringing down the arm, and so converting the case into a hand-and-head presentation.

Tyler Smith quotes Simpson, but cites no case as having fallen under his own observation. He adds, "It would be well if accoucheurs meeting with such cases should put them on record." Playfair, in his excellent work on obstetrics, describes a case occurring in his own practice, in which he tried to get the head through the brim with forceps, and failed. He finally delivered by turning. So little attention has been given to this complication by obstetrical writers that I thought it might not be unwise to record my own experience in reference to it.

On the evening of May 26, 1878, I found Mrs. R. J., age twenty years, in labor with her first child. The lady, who was well built, had been in excellent health throughout her gestation, except that during the two weeks preceding labor she complained of pain in the abdomen on moving about, and as that region was very protuberant I ordered a well-fitting bandage to be worn until labor should begin. I saw her at nine P. M. of the day above mentioned, and learned from the nurse that she had suffered with well-marked pains since noon; these continued until four A. M., the day following, when the os was fully dilated, and the waters broke.

With a view to stimulating the womb to more active contraction, I then began gently to manipulate it externally, when I was surprised to

find on the left side, about half-way from the fundus, a spot that was quite tender on pressure, and also that the womb bulged out at that point, making its contour somewhat irregular. I was unable to satisfy myself in regard to the probable cause of this condition.

The head presented in the first position, and with difficulty entered the pelvic brim. Although the pelvis was roomy and the pains strong, the head advanced very slowly, seemingly out of all proportion to the expulsive force and good size of the pelvic cavity; but as it *did* advance, though with extreme labor, I thought it unwise to send for forceps, as my office was at a great distance. The lady complained much of the tender spot on the womb, and I ordered fomentations of hot rum to be applied. The head finally reached the perinæum, and aided by the most powerful uterine and abdominal action it passed into the outer world. Although the expulsive force continued to be strong, the shoulders refused to come. Passing my hand into the vagina I found that the child's right arm was displaced, and lay across the back of its neck; hooking my finger into the axilla I brought down the arm across the chest, when the body was immediately expelled. The placenta came away in the course of an hour after the exhibition of ergot and the practice of considerable traction on the cord. The child's arm was much flattened and completely paralyzed, but as the bone was intact I gave a favorable prognosis.

The cause of the tender spot with the bulging of the uterine wall was now explained. It was evidently due to pressure exerted by some portion of the displaced member. After the os uteri was fully dilated this arm formed a bar which hitched against the pelvic brim, and prevented the head from entering freely, but the expulsive force was so great that the head and arm were pushed on, and the second stage of labor completed after three hours of powerful and continued uterine action. Had the presenting part failed to engage, an examination would have been made, and the offending arm doubtless discovered; but the pains being strong and the pelvis roomy the head was born, and the displaced arm was then revealed, owing to the delay in the expulsion of the shoulders. The child was a girl, weighing twelve pounds.

When in a case of dorsal displacement of the arm the head fails to engage in the brim, an effort should be made to bring down the arm as Simpson suggested, especially if the size of the pelvic cavity and the character of the pains give reason to believe that nature can effect delivery, as she did in my case even with the arm displaced.

The last time I visited my patient was nine days after delivery, when she was comfortable, and as far as I could judge every function was properly performed. I ordered her to be kept in bed several days longer. There was no tenderness of the womb remaining. While in the room I noticed that the child had acquired full use of her previously paralyzed arm.

A month later I was surprised to learn that a few days after my last visit the lady had been seized with some trouble in the abdomen, and through the influence of an officious relative had been suddenly removed out of the city, and put under the care of an irregular practitioner. What this affection was, and whether it had any relation to her accouchement, I was unable to learn.

EMBOLISM OF LEFT FEMORAL ARTERY CONSEQUENT ON VALVULAR HEART DISEASE; DEATH.

BY E. P. HURD, M. D., NEWBURYPORT.

MRS. R., aged forty-seven, had been since 1870 under my care for valvular heart disease. There were symptoms of both aortic and mitral insufficiency, and the case was so diagnosticated by me in 1870, Dr. F. I. Knight, of Boston, concurring. The leading features of the case were frequent attacks of pain over the heart, palpitation, and dyspnoea; these were at times most distressing. In 1878 she had pneumonia of right lung, with persistent cough, orthopnoea, and prostration. To the surprise of everybody she recovered from this illness, a troublesome cough remaining. Mrs. R. was always weak and anæmic, although her naturally energetic disposition kept her almost constantly at work. There was never any anasarca.

February 22, 1879, nine o'clock, A. M. Mrs. R. was suddenly seized with a violent pain in left lower extremity, which sometimes took the form of cramp of the muscles of the calf, sometimes was like a burning sensation in the foot. Associated with this pain there were coldness and numbness, — *anesthésie douloureuse*. Above the knee the natural sensibility and warmth were retained. Veins of foot and leg were distended, and there was stasis. *There was no pulse in left popliteal, nor was any pulse discoverable in any artery of the member supplied by that vessel.* Pulsation in the femoral at the base of Scarpa's triangle could be felt, but at no other part of its course. The circulation of the right lower extremity was normal.

Diagnosis. Embolism of femoral or popliteal. The clot had evidently been washed out of the left ventricle; it might have been formed during the transit of blood over a roughened aortic orifice.

Treatment. Whatever could make the patient most comfortable, a fatal issue being foreseen. The limb was wrapped in warm flannels; these, assiduously renewed, brought back heat.

The heart's action was weak, rapid, and tumultuous, as if that organ were becoming paralyzed from shock. It was a condition of *asystolie*. Tincture of digitalis in ten-drop doses every hour, in a tablespoonful of

brandy. Gilman's chlorodyne in teaspoonful doses every half hour for pain.¹ Two o'clock, P. M. A little abatement of pain. Pulse has improved somewhat under digitalis. There are two large patches of gangrened integument, of dark brown color and parchment feel, six or eight inches square, on the front and lateral aspect of the left leg; there is also a dark, "mummified" patch as large as the palm on the dorsum of the foot. The integument of the entire leg and foot is of purplish color, mottled here and there with streaks of livid extravasation, and for some distance above the knee punctiform petechiæ are abundant. Six P. M. Pain has been relieved by the chlorodyne. Brandy and milk have been freely given. Tincture of digitalis in fifteen-drop doses every two hours.

February 23d. A very feeble attempt at collateral circulation; the whole limb threatens to become gangrenous. Mrs. R. has slept a few hours. Pulse 100, weak and compressible; it is sudden and jerky, without any prolonged swell of the artery. There is a soft murmur, heard at base and apex, with both sounds of the heart. Complexion purplish and sallow; veins everywhere distended and prominent; pulsation of right jugular well marked.

February 24th, nine o'clock, A. M. Mrs. R. has vomited at intervals all night; medicine and nourishment have been necessarily suspended. Patient is prostrate, and apparently sinking. Digitalis, in twenty-drop doses of the tincture, caused her to rally somewhat, but at ten P. M. she died.

An autopsy was performed the next day, Drs. Howe, Healey, and Hurd being present. Only the thorax and abdomen were examined. Abdominal organs were healthy, with the exception of the liver, which was hyperæmic and hypertrophied; from incisions made with the scalpel venous blood flowed freely. Gall-bladder greatly distended. Heart enlarged and encroaching on left lung; pericardium full of fluid. Right side of heart hypertrophied and dilated; no valvular lesions. A firm and partly organized clot was attached to the muscoli pectinati; it extended into the infundibulum of right ventricle. Left auricle was enormously enlarged, and the four pulmonary veins entering it looked like huge aneurismal pouches. Section of the auricle disclosed hypertrophy and dilatation; the mitral valve was contracted to a mere chink, firm and resisting, which the index finger could hardly be made to enter. This, when the ventricle was opened, was found to be due to agglutination of the segments of the valve by old inflammatory deposits, and to subsequent contraction and induration. The sigmoid valves of the aorta were rigid and indurated, opposing obstruction to the efflux of blood. Their incompetence to prevent regurgitation was shown by the usual test of

¹ For the formula of Gilman's chlorodyne I am indebted to a former number of the JOURNAL.

pouring water into the aorta. There was also thickening and dilatation of left ventricle, and general pulmonary congestion.

In this patient we had aortic constrictive, aortic regurgitant, mitral constrictive, mitral regurgitant, lesions, and a striking example of how much serious heart disease may be tolerated for a series of years, with a fair degree of general health and comfort, and ability to perform the ordinary duties of life.

Embolism of large arteries of the extremities in heart disease is generally if not always fatal, the patient dying from shock, or from inability of the heart to establish a sufficient collateral circulation.

The good effects of full doses of digitalis in this case were very manifest, and there is probably no other remedy that would have proved equally efficient.

ANNUAL MEETING OF THE MASSACHUSETTS MEDICAL SOCIETY.

THE usual initial meeting of the Massachusetts Medical Society was preceded during the forenoon by medical visits of the Fellows, and surgical operations before them at the hospitals. At the Massachusetts General Hospital Dr. H. J. Bigelow performed his operation for litholapaxy; Dr. C. B. Porter excised a parotid gland and exhibited surgical cases, among which was one of extrophy of the bladder, in which Dr. Porter had performed a successful plastic operation.

At the City Hospital, Dr. Thorndike amputated a breast, Dr. H. W. Williams operated for cataract, and Dr. Ingalls removed a fatty tumor and operated on a case of necrosis.

At Carney Hospital, Dr. Arthur Cabot applied Sayre's plaster jacket for the benefit of one of the Fellows.

During the afternoon of this day the Warren Museum at the Medical College, the Warren Museum of Natural History on Chestnut Street, Children's Hospital, and Museum of Natural History Society were visited by the Fellows.

The initial meeting was called to order promptly at twelve o'clock, in Horticultural Hall, on Tuesday, June 10th, by the president, Dr. George H. Lyman, who at once introduced the readers of papers, namely, Dr. Rollin C. Ward, of Northfield, who read an essay on *The Physician's True Position in Society*; Dr. James B. Ayer, of Boston, whose subject was *Cases of Insanity following Acute Diseases*; and Dr. George K. Sabine, of Brookline, whose paper was entitled *Intestinal Catarrh of Infants*.

In our report of the last annual meeting of the society the criticism was made that not one word of discussion was elicited by the papers then read. On this occasion, however, the president called upon the Fellows by name and asked for remarks. The result was a most interesting discussion upon the very excellent papers of Drs. Ayer and Sabine, in which many gentlemen took part. We trust the precedent thus established by Dr. Lyman may be

followed by future presidents on similar occasions. At the close of this meeting the president announced that since the Medico-Legal Society wished to occupy the afternoon he would adjourn until the following morning at nine o'clock.

At three p. m. of Tuesday the Medico-Legal Society was called to order by its president, Dr. Alfred Hosmer, who introduced the members appointed to read papers having a medico-legal bearing. They were as follows: A Digest of Returns from Members of the Society for the Year ending December 31, 1878, by Medical Examiner F. Winsor, M. D.; Duties of Officers under the Present Law of a Medical Examiners, and the Relations of the Community thereto, by associate member Hon. Asa French; Report of a Committee on Expert Testimony, What it is and What it should be: Report of a Committee on the Use of the Metric System of Weights and Measures in Forensic Medicine; A Medico-Legal Case of Abortion followed by Conviction, by medical examiner J. C. Gleason, M. D.; on Pathological Changes in Pyæmia and Septicæmia, by associate member E. G. Curler, M. D.; Evidences of Abortion derived from Clinical and Post-Mortem Teaching, by Medical Examiner C. C. Tower, M. D.; a paper on Death by Lightning, by Medical Examiner J. L. Sullivan, M. D., was deferred on account of insufficient time. Meeting then adjourned.

At a private meeting this society, save in one instance, reflected its entire board of officers, the exception being the substitution of Medical Examiner Abbott, of Wakefield, in the place of Medical Examiner Winsor, as corresponding secretary.

At seven o'clock, p. m., the annual meeting of the councillors of the society was called to order by President Lyman in the hall of the Medical Library Building. The records of the last annual meeting were then read by the secretary, Dr. F. W. Goss, and were accepted. The nominating committee was next announced, and consisted of one Fellow from each district. On its return to the hall the chairman, Dr. Bronson, announced the slate for 1879-1880 as follows:—

President, Dr. George H. Lyman, Boston. Vice-President, Dr. David P. Smith, Springfield. Treasurer, Dr. Frank W. Draper, Boston. Corresponding Secretary, Dr. Charles W. Swan, Boston. Recording Secretary, Dr. F. W. Goss, Roxbury. Librarian, Dr. David H. Hayden, Boston. These officers were all elected by ballot. Following which the president nominated as

Orator, Dr. Thomas H. Gage, Worcester.

Anniversary Chairman, Dr. J. Collins Warren, Boston.

Committees: Of Arrangements, Drs. Robert Amory, C. J. Blake, F. C. Shattuck, W. L. Richardson, J. O. Green, E. G. Cutler.

On Publications, Drs. G. C. Shattuck, R. M. Hodges, B. E. Cotting.

On Resignations, Drs. James Ayer, Francis Minot, J. C. White.

On Finances, Drs. C. D. Homaus, W. W. Wellington, G. J. Arnold.

To procure Scientific Papers, Drs. H. W. Williams, Calvin Ellis, F. K. Paddock, G. S. Stebbins, J. R. Chadwick.

On Ethics and Discipline, Drs. Charles Howe, R. L. Hodgdon, G. J. Townsend, G. E. Francis, A. H. Johnson.

These nominations were accepted and the gentlemen elected.

Meanwhile the secretary read the names of new members, sixty-one in all ; next, the list of Fellows deceased since the last annual meeting, in all thirty-three, their average age being 63½ years.

The treasurer, Dr. Draper, presented his report, which in brief was: Received from all sources during the year, \$10,186.63 ; expenditures, \$8334.53 ; balance in treasury, \$1852.10. By a subsequent vote three fourths of this amount was distributed *pro rata* to the district societies.

The funded property of the society remains as it did at the last annual meeting. Total amount, \$33,124.73. The chairman of the auditing committee reporting that the treasurer's account was correct, it was accepted. The chairman of the committee on resignations then made his report, and his recommendations of gentlemen for resignation, retirement, and to be dropped for delinquency in dues were duly considered and acted upon according to the suggestions of the committee. The chairman also recommended Dr. Sapolini, of Milan, Italy, for appointment as honorary member. He was elected by subsequent ballot.

The report of committee on publications was next read by Dr. R. M. Hodges, and accepted.

The committee on by-laws represented through Dr. Hosmer, chairman, that their labors had been directed to comparison of by-laws of district societies with those of the parent society. It was found that they were uniform in all respects. Report accepted.

Committee on library, Dr. Stedman, reported in regard to number of exchanges from state societies received during the year. Dr. Stedman also announced that it had been suggested that members may be willing to give up their *Braithwaite* in order to swell the funds of the society. Circulars questioning them on this point will be addressed to the Fellows.

The report of the committee on finance, in the absence of Dr. Homans, chairman, was read by Dr. Wellington, and accepted.

The time and place of the next annual meeting were then recommended, namely, the second Wednesday in June, Boston. Accepted by vote.

Special committees were next called for. As chairman on the committee to notice the death of Drs. Jacob Bigelow and J. B. S. Jackson, Dr. Calvin Ellis read the following beautiful and impressive tribute:—

“ When, at this our annual gathering, we call the roll and receive no response from Jacob Bigelow or John Barnard Swett Jackson, whose lives are a record of noble labor, we are reminded that the mere announcement of their names is a higher eulogy and a fuller expression of a sense of loss than any formal phrase of ours.”

By vote the secretary was directed to enter these words upon the records of the society.

Dr. Davis then read a eulogy upon Dr. Comstock, of Middleboro', which, together with sympathetic remarks of Dr. Storer, it was voted to enter upon the records. A copy will also be sent to the family of the deceased.

The committee appointed in June, 1878, and to which was referred the resolution of the South Middlesex Society in reference to the admission of female practitioners to the Massachusetts Medical Society, then reported through Dr.

Hodgdon that, at the largest meeting of the committee, they were equally divided, and that therefore no decision had been reached.

Dr. Cogswell then said that since, only an hour before, Dr. H. W. Williams (whose absence was caused by the sad accident in his family) had expressed an earnest desire to present his views upon this question, he would move that the matter be recommitted to the committee for report at the October meeting of the councilors. The motion was affirmed.

Dr. Millet at once proposed an addition of four to the committee, in order to secure an opinion.

Dr. Driver, of the Middlesex Society, then stated that if delay were intended he wished to offer a protest.

Dr. Cogswell assured the councilors that his motion was dilatory, but was made out of respect for Dr. Williams, who wished to express his views upon this subject.

Dr. Cogswell's motion having already been voted upon in the affirmative, a vote upon Dr. Millet's proposition to increase the number of the committee was called for, and resulted in thirty-four ayes and forty odd noes.

Dr. Millet then moved that the committee submit the matter to legal opinion.

Dr. Hodgdon replied that the committee had already done so, and that legal opinion had influenced its action, and would be embodied in its report. The opinion was that the question of admission or non-admission of women to the society would legally be left to the judgment of the Fellows.

The result was that the whole subject was recommitted for report at the October meeting. Later in the evening, Dr. Driver, who originally presented the resolution from the Middlesex District, moved that the secretary be authorized to state in the circulars calling the October meeting that a report on the woman question would then be made, in order to secure a full meeting. The motion was affirmed.

The president then mentioned that it was necessary to find a new place of deposit for the records of the society. They are of great value, and cannot be replaced. For some years they have been kept by the Massachusetts Historical Society, which now desires their removal.

On motion of Dr. Bowles, it was voted that the treasurer be authorized to deposit these records temporarily in safe keeping until the councilors decide what to do with them.

On motion of Dr. Storer, it was voted that the treasurer be authorized to purchase at once a safe suitable for the protection of the records, and that the same be placed in the Medical Library Building. In order to procure funds for the same, subscriptions were suggested.

Dr. Millet then moved that the vote to distribute three fourths of the treasurer's balance to district societies be rescinded, and that the amount be devoted to the purchase of the safe. On assurance of Dr. Draper that this was unnecessary, the motion was withdrawn.

On motion of Dr. Goss, it was voted that the thanks of the society be presented to the Massachusetts Historical Society for kindness in protecting the records.

The treasurer then stated that among the funded property of the society were \$10,000 in ten-forty bonds, which have been called in and the interest

upon which will cease July 28th. He asked for authority to convert the same into four per cents. On vote of the councilors the authority was conferred.

Four ex-Fellows, Drs. Fairbanks, of Ashfield, Warren, of Spencer, Dean, of Taunton, and Hewbon, of Worcester, were next readmitted to the society by vote.

A note of regret at his absence from Dr. Henry I. Bowditch was then read; also a paper in which he offered the resolution that the treasurer be authorized to refund the amount paid to the society under legal pressure by Dr. Whiting, of Charlestown. Accompanying was a letter from Dr. Whiting, showing what he considers the injustice of the course pursued in his case. Referred to financial committee for report in October.

Dr. Streeter, of the Norfolk District, then presented the request of his society that it might be allowed to hold meetings out of their district. Reason: the great inconvenience to members in reaching the present place of meeting. He also presented a lengthy memorial, the reading of which, inasmuch as every gentleman present had received a printed copy at the door, was superfluous. Much discussion ensued, during which the law passed June 12, 1877, namely, "that a district society cannot legally hold an organized meeting for any purpose whatever at any other than some place within the limits of its own district," was rescinded. Finally, Dr. Cogswell moved that the whole matter be indefinitely postponed, the object of this motion being to leave the question to the judgment of the Norfolk District, and thus avoid establishing a precedent for other district societies. Dr. Bowles then moved that Dr. Cogswell's motion be modified to a motion that the subject be postponed to the October meeting. Councillors voted no to this, and aye to Dr. Cogswell's motion.

ANNUAL MEETING.

At nine o'clock on Wednesday morning, the annual meeting of the general society was called to order in Horticultural Hall by the president.

The secretary and treasurer read their reports, details of which have already been given.

The report of the committee on the revision of the United States Pharmacopoeia being called for, Dr. Amory, chairman, read the same, concluding with six recommendations, the purport of which is as follows: (1.) That three delegates be sent to the pharmacopoeial convention, and that the society recommend to the convention the adoption of the metric system of weights and measures in addition to that now in use, in directions for making preparations and in statement of doses.

(2.) That the society be of opinion that the next edition would be more valuable if more information be added concerning botany, chemistry, therapeutic and physiological effects, antidotes, and *average* doses of drugs included in the list.

(3.) That the material accumulated by the committee in favor of or against drugs be placed in the hands of delegates to be appointed.

(4.) That an annual supplement be prepared after publication of the decennial revision.

(5.) In order to increase its value, that the decennial revision be prepared

by the best talent, said talent to be secured by proceeds from a proposed fixed copyright interest in the sale of the work.

(6.) Finally, that this report, and the material collected, be presented to the next pharmacopœial convention.

The recommendations were accepted, and three delegates, Drs. R. Amory, R. S. Edes, and E. S. Wood, appointed by the chair.

An excellent essay on The Trials and Triumphs of the Country Physician was then read by Dr. B. D. Gifford, of South Chatham, followed by interesting papers on Insane Drunkards, by Dr. T. W. Fisher, and on Some Diseases of the Eye requiring Immediate Treatment, by Dr. C. H. Williams, both of Boston. Delegates from state societies, namely, Dr. Wainwright, of the Connecticut State Society, Dr. Sawyer, New York State Society, Drs. Crosby and Cook, of the New Hampshire Society, were introduced, and presented greetings from their respective bodies.

Dr. Marcy, of Cambridge, then exhibited a remarkable case of aneurismal varix.

At twelve o'clock Dr. George W. Garland, of Lawrence, delivered a well-received annual discourse, after which the Fellows proceeded to the tables in Music Hall.

ANNUAL DINNER.

At one o'clock the anniversary chairman, Dr. C. C. Holmes, called the society to order. In the enforced absence of the Rev. Phillips Brooks, chaplain of the society, prayer was offered by the Rev. William Lawrence.

The bountiful and toothsome repast next received earnest attention, and it may be said that the cold lunch proved far more satisfactory than the somewhat uninviting lukewarm dishes heretofore provided.

At two o'clock the Fellows were again called to order by Dr. Holmes, who in an effective manner offered his congratulations upon the return of the day, and said that although the past year contained no great discovery or startling invention the society could not help seeing substantial progress based upon advancing knowledge. Gentlemen, the road is open before us. No entangling alliances. With the tremendous power of good in our hands let us perpetuate as we can our claim upon the respect and gratitude of men. Dr. Holmes then felicitously called upon President Dr. Lyman to respond for the Massachusetts Medical Society.

Dr. Lyman responded in the following well-chosen words:—

"Mr. Chairman,—The presidency of this venerable society, with all its honors, has, like all good things, some disagreeable elements, not the least of which is the necessity which it imposes of replying to an after-dinner toast. If the sentiment of the chairman had only contained the germ of an idea,—a little suggestion of something to talk about,—it would have been a friendly act; but to tell a modest man that he is that nondescript creature, a good fellow, is rather awkward, and not debatable. I must fain content myself, therefore, with assuring you *'officially,'* if there be any who have any doubts in the matter, that the society was never so flourishing, never so free from the bitterness of past controversy, or from anxiety as to any future pitfalls which may be in our path. There is a growing prevalence of late years of a different method

of handling vexed questions. If we have learned nothing else, we have learned to agree to disagree; we have learned that a quickened pulse under temporary excitement is better treated by sedatives than by irritants, and that earnest opinions, earnestly but courteously expressed, are of much more favorable augury than lethargic indifference. We have learned something of the true value and meaning of our charter, and that no vital change can or ought to be carried as against an unconvinced majority, any more than it can be prevented by an unwilling and obstinate minority. There are subjects in which as a society we are all deeply interested, but it would be in bad taste to specify them here, for our object now is relaxation, not discussion, the renewal of friendly acquaintance, not the indulgence of professional differences.

"A continuance of our prosperity depends on ourselves. We are all surely seeking one end, and one only, and that is the maintenance of our influence as a profession in the community in which we live upon all questions which legitimately belong to us, and upon which they have a right to look to us for guidance. A careful, courteous consideration, in a broad and catholic spirit, of such propositions, with the single desire of arriving at the truth, is the only safe course on which to base either the adoption or rejection of any measure. He who is convinced against his will will prove eventually to be more unconvinced than ever. Let us, then, follow in all things that great unwritten code of ethics which demands of each member that he shall be a *gentleman*, for that is a code which cannot be evaded. This society ought to be looked up to as the highest tribunal, the supreme medical court, for the decision of all questions which relate to the health and the morals of the community, as is our supreme judicial court the ultimate arbiter in questions which involve their wealth and morals. This would be no encroachment upon the functions of our reverend friends the clergy, for I am sure that neither the doctors of law nor the doctors of medicine would ever feel equal to their work were their efforts not based first, last, and all the time upon that sure foundation which it is the privilege and duty of the doctors of divinity to demonstrate to us."

Dr. G. W. Garland then briefly responded to a sentiment to the orator of the day.

Collector Beard replied to a toast to the president of the United States by saying that if he were to respond officially for the president he should say that he needed neither defense nor eulogy, for he has shown himself master of the situation. He closed with pleasant boyhood reminiscences of the family doctor.

"The State of Massachusetts" brought a response from Lieutenant-Governor Long, who expressed his regret at the unavoidable absence of Governor Talbot, and then, in one of the most eloquent speeches of the occasion, he expressed his recognition of the services of members of the medical profession in the halls of legislation and in the executive councils of the State; of the excellent effect of the establishment of the medical examiner system; of the great and increasing good accomplished by the board of health; and closed with a tribute to the profession in general, making graceful and affecting allusion to the character of Surgeon-General Dale.

Mayor Prince then responded for the City of Boston in words of congratulation upon the high position of the society, and with humorous reference to the effect upon patients of the vacation of their physicians.

President Elliot was called upon to respond to a toast to Harvard University. He said it gave the representatives of the university great pleasure to extend its greeting to this the strongest professional body in the country, and then entered upon a very humorous delineation of a disease peculiar to Harvard students. For symptoms of the same we must refer our readers to the reports published in the daily papers.

Dr. D. Humphrey Storer was called upon to speak in memory of the dead. His sententious and eloquent eulogies framed such striking portraits that only the few failed to recognize Jacob Bigelow, J. B. S. Jackson, and W. W. Comstock.

The chairman alluded to the absence of Dr. Bowditch, regretting the cause of his detention. Dr. Amory then read an earnest and characteristic letter of greeting from Dr. Bowditch, after which Dr. Wainwright responded happily for the Connecticut State Medical Society.

Surgeon Head responded for the United States army in interesting reminiscence.

Assistant Surgeon Stevenson briefly replied to a toast to the United States navy.

Dr. Alfred Hosmer, president of the Medico-Legal Society, made a fine response to a toast touching upon the marriage of law and medicine.

Dr. Millet, of Bridgewater, briefly responded to a sentiment to the medical profession.

We regret that space does not allow us to include the very pertinent and happy toasts of Dr. Holmes, who, though a veteran toast-master, never excelled his record of this occasion.

About six hundred and fifty gentlemen were at the tables, of whom, with but five exceptions, all were physicians.

The exercises were interspersed with excellent music by the Germania orchestra; everything passed off satisfactorily, and this successful annual meeting will only increase anticipations of the pleasure of future meetings of the Massachusetts Medical Society.

PROCEEDINGS OF THE CONNECTICUT RIVER VALLEY MEDICAL ASSOCIATION.

A. F. RICHARDSON M. D., CORRESPONDING SECRETARY, WALPOLE, N. H.

MAY 7, 1879. The annual meeting was held at Towne's hotel, Bellows Falls, Vt. Thirty members were present, Dr. Brooks, of Charlestown, N. H., in the chair.

Epidemic Diseases.—This was the subject of the president's address, having particular reference to the comparative frequency and violence in the Connecticut River Valley and the region extending on either side. It was shown by Gallup's history and by the testimony of old practitioners, as well as by observation, that epidemic diseases have been much more prevalent and severe on the hills than in the valleys. The speaker was inclined to the belief that the cause was largely due to meteorological changes, there being two or more degrees' difference in the isothermal lines included in these regions. As this difference causes marked changes in the flora, it must produce a like effect

upon health and disease. As epidemic diseases are more severe on the hills than in the valley, the conclusion was reached that the former are near or at the centre of the disease realm, while the latter is on its border.

Discovery of Anæsthetics.—Dr. Loveland read a paper on the history of the discovery of anæsthetics, awarding the discovery to Horace Wells, who was born in Windsor, Vt., in 1815. He studied dentistry, and was located in Hartford, Conn., at the time he discovered the anæsthetic property of nitrous oxide gas, December 11, 1844. Dr. Riggs administered the gas to Dr. Wells at this time and extracted a molar tooth. Dr. Wells devoted all his faculties to the details of his discovery, and published the results. His desire to benefit mankind overcame all pecuniary considerations. In January, 1845, Dr. Wells, in connection with his friend, Dr. Marcy, discovered the anæsthetic property of the agent generally used, namely, *sulphuric ether*. Dr. W. G. T. Morton, a former student of Dr. Wells, who is named in works of high authority as the discoverer, did not use any anæsthetic agent till September 30, 1846. Some of the statements contained in the paper were novel to many present, but the reader claimed that they rested on a solid foundation, he *being acquainted with the mother and sister of Dr. Wells, from whom he had obtained some of the above facts.*¹—Dr. Allen, of White River Junction, Vt., remarked that Horace Wells deserved the honor of discovering the use of anæsthetics. — Dr. Frost said Boston was ready to take the honor, but it belonged to Wells. — Dr. Phelps remarked that while attending medical lectures at Burlington, Vt., in 1822, the idea prevailed in the class that by inhaling sulphuric ether from a saucer through a tunnel one could have a tooth extracted without pain. He did not know that any teeth were extracted under its influence.

Carcinoma of Rectum; Lumbo-Colotomy.—Dr. G. W. Hunt, of Cornish Flat, N. H., by request reported the following case: A farmer, forty-seven years old, was having five or six discharges from the bowels daily, sometimes accompanied with blood and mucus, with very little pain. Patient said that eighteen months before he had a slight attack of dysentery; but did not have medical treatment. Since then his bowels had been slightly irregular, but he had no trouble sufficient to hinder him from active work. Had general appearance of health, digestion good, was working as usual, but supposed he was suffering from piles. Rectal examination revealed a hard mass, three inches from sphincter muscle, filling the rectum so that it would not admit a gum catheter. Carcinoma was diagnosed. A week later all movements from the bowels had stopped. On consultation with Drs. Phelps and Frost an operation was recommended. Dr. C. K. Briddon, of New York, was summoned by telegraph, and performed the operation as follows: The patient was etherized, and placed with face downwards, and a pillow under the abdomen. An incision five or six inches in length was made upon the left side, between the crest of the ileum and the lower rib, and midway between the crest of the ileum and the posterior processes of the third and fourth lumbar vertebrae, down by the outer side of the quadratus lumborum muscle, by a careful dissection, till the colon was revealed. The bowel was inflated through a tube in the rectum, so as to bulge somewhat into the wound, and was then transfixed by two strong liga-

¹ The italics are ours, as we have not space to inflict again upon our readers a statement of the facts. — Ed.

tures, one and one half inches apart, carried deep through the lips of the wound, when a transverse incision was made one and one half inches long, not quite half severing the intestine. The ligatures were hooked up through the cut in the bowel and divided, thus making four sutures. A few small sutures were added between the large ones, and the artificial anus established by fine sutures around the cut of the bowel. The colon immediately discharged feces freely, the patient rallied well, the wound healed rapidly, and the man, five months after the operation, is in comfortable health, looking after his business. He has two or three evacuations daily, with a few minutes' warning of the same. The tumor has not made rapid progress since the operation, and the patient's lease of life seems much extended.

Dr. Frost presented a model of the brain now in possession of Dartmouth College, and gave a review of the anatomy of the head; exhibited also a diagrammatic representation of the function of the brain, and gave an interesting and scholarly explanation of the same.

Epithelial Cancer: Specimen.—Dr. Rugg, of Hartland, Vt., presented specimen of cancerous uterus. The disease had run the usual course.

SUMMERS ON YELLOW FEVER.¹

THIS little work, which is dedicated to three of the author's former students and collaborators who lost their lives in the great epidemic last summer, gives in a lucid, logical, and practical manner the writer's views, drawn from experience on the various points at issue regarding yellow fever. Etiologically, he considers it a zymotic disease, not necessarily dependent upon a *specific* germ; always ushered in in any locality by a train of intensified malarial influences, which gradually glide into the specific fever; depending for its development upon atmospheric relations of heat and moisture which are favorable to sporulation of the infectious germs; not contagious but infectious, and liable to spring up at any time in Southern latitudes *indigenously*, whenever the atmospheric conditions favor. This is in opposition to the more popular opinion which has been usually promulgated in our Southern States. The author bases his opinion on the preëxisting aggravation in the type of the malarial fever, which he states always ushers in the specific yellow fever, and upon the fact of its occurrence during the last epidemic in many small, isolated places, "where there was no possible chance for the importation of the disease without knowledge on the part of the inhabitants. . . . The issues have been so fearful," he says, "that it is no longer expedient, nor possible, indeed, to waive the investigation of their origin. We have already too long hugged the delusive phantom of quarantine, which is as inhuman as it is unscientific and impracticable."

In these matters he is in accord with an increasing number of experienced physicians in the South, who believe that yellow fever is now indigenous; that for its development both "seed and soil" are requisite; that in many places, for instance, Huntsville, Ala., Atlanta, Ga., and Nashville, Tenn., the soil

¹ *Yellow Fever.* By THOMAS O. SUMMERS, M. D., Professor of Anatomy and Histology in the University of Nashville and Vanderbilt University. Wheeler Bros. Nashville, Tenn. 1879.

does not exist, as has been shown by exposure to frequent epidemics; and that when both these factors are present quarantine is of no avail. On the other hand, last summer, in Galveston, Texas, where strict quarantine, carried to the extent of non-intercourse with infected districts, prevailed, there was not a case of yellow fever, although in all former epidemics for thirty years whenever yellow fever has broken out at New Orleans it has soon after attacked Galveston, transferred presumably by vessels.

Although Dr. Summers presents his convictions on these points in strong terms, there are still many doubtful questions regarding the origin, cause, and mode of propagation of yellow fever, in answer to which it may be said that we derive little assistance from the hasty and *ex parte* report of the United States Yellow Fever Commission presented last autumn. The necessity for the greatest vigilance in sanitary measures is the one thing upon which all agree.

The author had good opportunities for post-mortem examinations at the city hospital in Memphis. The pathological appearances noticed were briefly as follows: Extraordinary fluidity of the blood; great hypertrophy and softness of the spleen, which in four instances was found to be eight inches long and five inches broad; signs of entire cessation of function in the liver; albuminous and bilirubine infarctions in the tubules and pelves of the kidneys, causing mechanical obstruction; not the slightest pathological change in the gastric walls, although twenty-eight cases presenting the greatest clinical divergence were selected. In some cases of violent black vomit the stomach was examined five minutes after death. A greenish, stringy substance, consisting of degenerated liver substance, blood corpuscles, and mucus, was found in many cases extending from the dilated gall-bladder through the bile duct and duodenum to the stomach, which was in some instances filled with a material of similar appearance, and giving the reaction for biliary coloring matter. This the author believed to be the black vomit, the excrementitious matters of bile which exude when the liver is not secreting, mixed with the fluids of the stomach and altered blood in certain cases. The yellowness of the skin was often absent, but usually a dusky violet-bluish color was observed, which later became yellow in many instances. The yellow color of the internal organs was attributed to biliverdine. The author is of the opinion that the cerebro-spinal system is primarily involved in yellow fever, and that the chief pathological fact is the entire suspension of secretion.

Clinically there is little that is new. Out of four hundred and eighty-two cases the author records two hundred and thirty-seven deaths preceded by black vomit, and thirty-nine recoveries after the occurrence of black vomit, which in some cases was copious. Most of the fatal cases were characterized by suppression of urine.

During the initial rigor a hot bath, the application of mustard to the spine and a dose of castor-oil are recommended. When the fever develops (104°-110° F.) the free use of ice externally and internally, cold spongings, etc., are necessary. The wet pack was useful. The author says, "Water is the remedy in yellow fever," but regrets the prejudices and want of courage which interfere with the application of so rational a method for lowering the temperature.

TYPHOID FEVER IN MELBOURNE.¹

THE author finds that typhoid fever first appeared in Victoria in 1842, when it was imported by passengers from an immigrant ship, on board which the disease had prevailed, and that it has since been repeatedly introduced in the same way. He states that genuine typhoid fever is the ordinary fatal fever of Victoria, where it tends to increase in severity, and is more fatal in proportion to population than in England. The author is also quite satisfied that typhoid fever is strictly and highly contagious, and that no proper effort has been made to destroy the contagion. The tendency on the part of many writers at present is to attribute to contagion a greater share of the prevalence of typhoid fever than has previously been accepted, and we believe with good reason. Unquestionably much greater care should be exercised in the disposal and disinfection of excreta, an object not likely to be gained as long as the disease is regarded as one of slight communicability.

ROCKWELL ON ELECTRICITY.²

THIS little book, as its name does *not* imply, cannot be said to give an unbiased discussion of the place of electricity in therapeutics. As a special plea it is, however, useful, as calling attention to this important subject, and especially to the value of the so-called "general faradization" and "central galvanization," with which the name of the author has long been associated.

Perhaps this is all that was intended, but then it would have been far better to have omitted the "compendious text-book" chapters, at once tedious and too brief, and to have remodeled the original parts into a printed essay.

WOOD'S LIBRARY OF STANDARD AUTHORS.³

THE LIVER.

THE last three volumes of this series, that of diseases of the liver, by Friedrichs, the celebrated professor of clinical medicine in the University of Berlin. The work was translated into English by no less a person than the late Dr. Charles Murchison. Two such names are rarely to be found together as guarantee of the excellence of a book. Former editions of this work have already been reviewed in these pages: we will merely say here that the "library" form in no way impairs the value of it. In each volume there is a

¹ *Typical Fever in Melbourne: Its Cause and Effect*. Based on the Report of an Inquiry made by Special Request of the Central Board of Health, etc. By WILLIAM THOMSON, F. R. C. S. Third edition revised, with Remarks on a Review of the Report. George Robertson, Melbourne, Sydney, and Adelaide. 1879.

² *Lectures on Electricity in its Relations to Medicine and Surgery*. By A. D. ROCKWELL, M. D. New York: Wm. Wood & Co. Pp. 300.

³ *A Clinical Treatise on Diseases of the Liver*. By DR. FRIEDRICH FRIEDRICHS. In three volumes. Vol. III. Translated by CHARLES MURCHISON, M. D., F. R. C. P. New York: William Wood & Co. 1879.

handsome frontispiece, and the text is liberally illustrated by wood-cuts. It is one of those treatises on especial subjects which practitioners would do well to study with care. They cannot afford to plead the excuse of want of time. The liver has long enough been blamed for most of the ills to which we are heirs, a target for map diagnoses and hap-hazard treatment. With such instruction as these volumes give, patients have at least the right to claim from their doctors a knowledge of the views of the standard writers of the day. The very cheap rate at which these volumes are disposed of to the subscribers is a significant fact, and we trust the experiment now being made will convince publishers that cheap medical literature of the right sort will "pay" as well as forms, we fear, perhaps more familiar to the trade.

THE SANITARY ASSOCIATION OF LYNN.

THE excellent results from the voluntary sanitary societies in Edinburgh and Tottenham have suggested the value of similar organizations elsewhere, and already Newport and Lynn in this country have followed their example. The Lynn association has just published a small pamphlet containing their rules, etc., in which one may readily recognize the work of a skillful and practiced sanitarian; and it might well serve as a model for similar societies which we hope will spring up throughout the country.

The objects of the association are (1) to promote a general interest in sanitary science, and to diffuse among the people a knowledge of the means of preventing disease; (2) to secure the adoption by the city authorities of the most effectual methods of improving the sanitary condition of the city; (3) to provide its members at moderate cost with such skilled inspection as shall secure the proper sanitary condition of their premises and those of other people in whom they may be interested. Any citizen of Lynn may become a member by paying an annual assessment of five dollars. He is entitled to vote at all meetings; to an annual inspection and report upon his premises by a competent person; to occasional supplementary inspection and advice, in case of an epidemic or undue prevalence of disease; to inspection of other buildings than his dwelling upon terms agreed upon by the executive council. There are working committees on diffusion of sanitary knowledge, on the sanitary condition of the city, and on inspection of buildings. Public meetings, lectures, articles for the press, tracts for distribution, investigations, coöperation with the municipal authorities, etc., are provided for. From the names of their officers, and from the quiet, straightforward statement of their plans, we predict for the Lynn Sanitary Association a future of great usefulness. Every city and town in the State should follow their example.

MEDICAL NOTES.

— We print this week another letter from Dr. Bigelow on the subject of litholapaxy, in which he criticises some remarks of Sir Henry Thompson on that operation, which appeared in the *New York Medical Record*.

NEW YORK.

— One of our principal surgeons, Dr. John Thomson Darby, has just died in the prime of life, although after a long and painful illness. He was born at Pond Bluff Plantation, St. Matthew's Parish, South Carolina, in December, 1836, and was consequently in his forty-third year. He pursued his medical studies at the medical department of the University of Pennsylvania, where he passed an unusually brilliant examination, and received his degree in 1858. He then became assistant to Dr. Joseph Leidy, the distinguished professor of anatomy in his *alma mater*, and remained in Philadelphia till the outbreak of the late war, when he returned to South Carolina, and entered the Confederate service as a surgeon. He was at one time on Gen. Robert E. Lee's staff, and also held, during a considerable period, the position of chief medical and surgical director in the commands of the armies of Virginia and Tennessee. After the close of the war he went abroad to study in England and on the Continent, and during the German war of 1866 served as a volunteer surgeon in the Prussian army.

On returning to America he was appointed professor of surgery in the Charleston Medical School, and retained the position until 1873, when he received an election to the chair of surgery in the medical department of the University of the City of New York, made vacant by the resignation of Prof. Alfred C. Post, and removed to this city. In time he was also appointed surgeon to Bellevue and the Mount Sinai hospitals. Ever since the civil war it is stated that he has suffered more or less from the results of a poisoned wound, and during the last two courses of winter lectures his health was such as to interfere seriously with the performance of his duties at the university. Consequently this spring he resigned his chair, and was elected professor emeritus.

Dr. Darby's wife was a niece of Gen. Wade Hampton, who was present at his funeral, and he leaves four children. He was esteemed no less as an accomplished gentleman than as a skillful surgeon, and he had won hosts of warm friends in his adopted city by his genial manners and high-toned character. In addition to various contributions to periodical medical literature, he was the author of Campaign Notes on the German War of 1866. He suffered from malarial trouble, with marked enlargement of the liver, besides his other complaint, and had been confined to the house since the early part of February last. The funeral services, prior to the removal of the remains to Columbia, S. C., for interment, were held at St. Ignatius Church on the 10th of June, and were attended by a large number of prominent medical men (besides other friends), including almost the entire faculty of the medical department of the university.

— We are informed that although there are at present no female students in the medical department of Syracuse University, this failure of an attempt at coeducation of the sexes, the faculty believe, is not to be attributed to any evil moral results, as a passage in our editorial of June 5th might possibly have led a hasty reader to infer.

— Small-pox continues to spread to a slight extent among the Bohemians, among whom the recent cases of it occurred, and who, as a rule, are not properly vaccinated. The objection made by them to vaccination is mainly in

consequence of superstition, and the health authorities have applied to the minister of the Bohemian chapel in Fourth Street to give a little common-sense advice on the subject to his congregation, with the hope of overcoming this prejudice. Last week six cases of small-pox were reported to the board of health, but since the beginning of the present week as many as five cases have been reported on a single day.

Scarlet fever still continues quite prevalent for this season of the year, one hundred and one cases having been reported during the week ending June 7th.

— On the first Saturday in June the first of the Poor Children's Summer Excursions took place, the party consisting of three hundred children from the German quarter of the city, who were taken to the summer home of the Children's Aid Society, at Bath, Long Island. On the following Monday one hundred and thirty children from the industrial schools of the society were sent down to remain for a week, and enjoy the benefit of the fresh air, the sea bathing, and good country fare that is there provided for them. Seventy quarts of milk a day are supplied by cows kept on the premises.

— A warning to many of the fair sex ought to be found in the announcement that a certificate of death from peritonitis in the case of a young woman who swallowed a pin eight months ago was recently received at the coroner's office.

ST. LOUIS.

— Entertainments in the way of a fair, an amateur opera, and an opera bouffe have recently been given here for the benefit of three hospitals, — the Mullanphy (Catholic), St. Luke's (Episcopalian), and the Woman's (non-sectarian) hospitals, — by which between twenty-eight and thirty thousand dollars were raised. Over twenty-six thousand of this went to the Mullanphy Hospital.

— A few days ago, at the City Hospital, upon post mortem, an aneurism was found in the kidney. The sac of the aneurism had ruptured, and the escaped blood had distended the capsule of the kidney till it was some eight inches long and between two and three inches wide. The aneurism itself was about the size of a pigeon egg.

At the same institution there is a case of hypospadias, the urethra opening just as it emerges from the scrotum. One testicle is very much atrophied; the other was injured, and removed some four years ago. The patient is forty-eight, and has never known sexual desire.

CORRESPONDENCE.

LITHOLAPAXY. — DR. BIGELOW TO THE EDITOR OF THE NEW YORK MEDICAL RECORD.

TO THE EDITOR OF THE NEW YORK MEDICAL RECORD, — An editorial paragraph in the *Record* of May 31st mentions that the letter from Sir Henry Thompson to Professor Van Buren, which appeared in the previous issue, was written for publication.

Sir Henry's reiterated criticisms of lithotrites should not be allowed to ob-

secure the main facts, be their value more or less, of rapid lithotripsy, which means long sittings for the immediate and complete evacuation of the fragments by large tubes, and depends upon the newly-discovered tolerance of the bladder to the smooth surfaces of instruments, while the old lithotripsy meant repeated short sittings and sharp fragments left in the bladder.

The size of a lithotrite has little to do with litholapaxy. Stones are so frequently soft and small that a small lithotrite of any kind may be often large enough. Of course the operator will be careful not to break such a lithotrite upon a large or hard stone. Like other lithotrites, mine is made in various sizes. It is not a large lithotrite that I have desired to bring to the attention of surgeons, but a new lock, with protective and non-impacting blades, designed to promote safe and rapid work at a moment when the hand or the attention of the operator is fatigued by a long operation. I prefer a large lithotrite, if it possesses these qualities, even in dealing with common calculi. Sir Henry prefers a smaller one, whether it clogs or not, and frequently withdraws it to clean it. His prejudice against a large instrument is connected with a life-long and erroneous theory that the dangers of lithotripsy result mainly from the instruments used in the operation. This was the general mistake of the day. It was not known that the irritation was really occasioned by the fragments which it was the custom to leave in the bladder. When these fragments were drawn out by my apparatus, and that source of danger to the bladder was removed, it was found that the instruments themselves did but little harm. Sir Henry, perhaps, might long ago have discovered this fact of the tolerance of the bladder to instrumentation, if he had possessed any means of evacuating it thoroughly. But he had only Clover's instrument, the tube of which was so small (21 French) that it drew out only sand, and left the fragments. Hence his error and failure to discover the new facts of what is now known as rapid lithotripsy.

Sir Henry devotes the last half of his letter to the expression of creditable sentiments in relation to his attitude towards surgical progress. A little explanation may be here desirable.

A year after the publication of my paper, he published a lecture in the *Lancet* (February 1, 1879), in which he says, "My own system has for a long time past been gradually inclining to the practice of crushing more calculus at a sitting, and removing more *débris* by the aspirator, than I formerly did,"—which might very well be true, his former sittings having been limited to two minutes or less; but the hindrance to his "removing more *débris*" was the small size of Clover's tube. The editor of the *Lancet* replied (February 15th), "We cannot close our eyes to the fact that the views advanced in his lecture of the 1st inst. do involve an abandonment of his old position. Lithotripsy as hitherto practiced by him, and lithotripsy as recommended and performed by Professor Bigelow, are different operations, and based on opposite and contradictory principles." This "editorial observation" in the *Lancet* Sir Henry, curiously enough, chooses to regard, in his letter published in the *Record*, as "adverse criticism of himself personally, not of his mode of operating."

In this connection Sir Henry expresses the opinion that the terms "abandonment of position," and the like, "adapted as they are to military men," do

not accord with the aims of men who "live and learn." . . . It is an error," he says, "to look for a life-long consistency in matters of opinion from men who think for themselves." The world will not question the right of Sir Henry to "live and learn," nor to "think for himself," but only the propriety of his claiming to have originated by "thinking for himself" ideas he has learned from others.

A friend has to-day sent me the fifth edition, just published, of Sir Henry's *Diseases of the Urinary Organs*. I find that in this edition Sir Henry both honors rapid lithotripsy with his indorsement, and appropriates as his own its essential details.

He adopts large tubes, increasing the ineffectual catheter of Clover from 21 to 29, which latter calibre I often employ, my smallest tube being 27, my usual size 30, and the largest 31. "You are first to introduce," he says (page 173), "an evacuating silver catheter fitted with a flexible stylet, — in size, say, from No. 14 to No. 16, English scale," calibres equivalent to 24 and 29 French.¹ Here being the essential feature of the operation, Sir Henry at this point definitively abandons "consistency" and the 21 tube of his previous editions in favor of "large evacuating catheters and a good aspirator" (page 177). Neither of these he used before I described them. This gives him the whole key to rapid lithotripsy, and he is able to accomplish thorough evacuation at once by prolonging the sitting till evacuation is complete, demonstrating at the same time that the bladder tolerates instrumentation if the fragments are removed, — which is the new principle that underlies litholapaxy. The large tube once appropriated, the rest is easy. The aspiration of his new edition means effectual aspiration with large tubes, and his lithotripsy becomes rapid lithotripsy.

A comparison of this, Sir Henry's present practice, with his recent opposite teaching of frequently repeated crushings — each confined to a few minutes, lest the polished instrument injure the bladder, but leaving the bladder nevertheless to struggle, in the intervals, with sharp, broken pieces of stone, which he had no means of extracting, — will show the significance of the criticism by the editor of the *Lancet*.²

In conclusion, I may venture to hope that the valuable example set by Sir Henry in accepting large tubes will aid in doing away with whatever apprehension still exists of danger from their use.

HENRY J. BIGELOW.

¹ Handerson's comparative scale, from which these equivalent numbers are taken, is made by Reynders & Co., New York. It is accurate, and very convenient in having, instead of holes, a long triangular slit like a wire gauge. "In England," says Sir Henry Thompson, "we cannot be said to have a uniform scale; all our measurements are very arbitrary. One maker has one scale, and another another." (*Diseases of the Urinary Organs*, 1879, page 47.) On page 48, however, he gives a scale, of which the largest size, 14, is the equivalent of 24, and this corresponds to Handerson's scale. (*New York Medical Record*, 1877, page 638.) The French numbers increase more rapidly than the English. Larger calibres have hitherto been but little known either in France or England. The main point is the necessity of enlarging Clover's tube.

² The *Lancet* of May 17th contains a letter on this subject.

SHORT COMMUNICATIONS.

IN-GROWN TOE NAIL.

MR. EDITOR, — The late eminent surgeon, L. L. Miller (of Providence), for very many years ablated the redundant flesh and a strip of the nail with a carpenter's gouge, at a blow. This mode he used prior to the use of ether; with ether he may have performed it with a scalpel.

JAMES O. WHITNEY.

PAWTUCKET, R. I.

A CASE OF "EAR COUGH."

BY WILLIAM S. BOWEN, M. D., PROVIDENCE, R. I.

ALTHOUGH many cases of the peculiar reflex cough from irritation of the external auditory canals have been reported by various authorities, such as Tissot, Pechlin, and Fox, of Scarborough, since the first published case of Fabricius Hildanus in 1596, it is undoubtedly true that many cases exist and go unrelieved in which medical treatment directed solely to the respiratory organs and the throat utterly fails to be of use. A case of dry, harsh cough of the type usually called "nervous," when a thorough physical examination of the lungs and of the larynx does not reveal an exciting cause, should be viewed with suspicion, and the external auditory canals should also be carefully inspected, and thus exclude, if possible, the reflex action above mentioned.

An excellent illustration of the necessity for this examination recently came under the observation of the writer.

A girl, aged eight, had been the subject of a dry and at times very distressing cough for nearly two years and a half, and had been under medical treatment, including electricity, during the whole of that time. Her general health was good, and she was unusually large and strong for her years. The fauces were free from disease, and a rhinoscopic and laryngoscopic examination showed an absolutely healthy condition of the parts from the dome of the pharynx to the bifurcation of the trachea. The right external auditory canal was filled with inspissated cerumen, and on removal a large jet bead was found impacted in the cylinder of wax. It had laid in contact with the floor of the canal, about two millimetres from the membrana tympani, and had caused considerable ulceration of the dermoid layer. The cough entirely disappeared in about ten days. The child would not acknowledge having placed the bead in her ear, but her friends remembered that she had such beads to play with while visiting relatives two years and a half before. The reflex action is through a branch of the auriculo-temporal branch of the fifth pair, and the connection takes place in the floor of the fourth ventricle of the brain.

FRANK F. MAURY.

DR. FRANK F. MAURY died in Philadelphia, on the 4th of June, at the age of thirty-nine. His wife died suddenly about a fortnight previous under peculiarly painful circumstances, while Dr. Maury was away from the city. Immediately on his return he was taken sick with pulmonary congestion, with the result as stated. They leave two children. He studied medicine at the University of Virginia and Jefferson College, and after graduation became assistant to Professor Gross, and was for a long time his chief of clinic. As a surgeon he had already given evidence of marked ability, and had attained a prominent position through his application to his profession and his skill as an operator. At the time of his death he was surgeon to the Philadelphia Hospital, and to the Jefferson College Hospital, and held a lectureship in the summer course at Jefferson College. He was at one time coroner's physician, but was obliged to resign this position on account of his large practice. He took a warm interest in Jefferson, and it was largely due to his efforts that the plans for erecting

the new hospital and equipping it for service were carried to a successful issue. Dr. Maury gave promise of attaining a very high position among American surgeons. He was associated with Dr. Duhring as editor of the *Photographic Review of Medicine and Surgery* a few years ago, but had contributed very little personally to the literature of his profession beyond occasional articles in the journals. He had an extended experience, and performed a number of capital operations, including the ligation of the innominate artery, gastrotomy for stricture of the œsophagus, and others of equal importance. He also had a series of cases of extrophy of the bladder, in which he obtained good results by a plastic operation, part of which was peculiar to himself. In social life he had charming manners, perfect address, and an air of warmth and candor that made him a host of friends; he was always light-hearted and impulsive, and if his sanguine temperament sometimes led him to promise more than he could possibly perform he was always sincere in his desire to oblige his friends. As a lecturer he was positive in his teaching and clear in his explanations, and his courtesy to his patients and the students made him a general favorite. In his clinics at the Philadelphia Hospital he more than once publicly reprimanded the attendants for rough treatment of patients, and turning to the class said, "Gentlemen, it should not make the slightest difference to you whether your patient is rich or poor; a sick person deserves all the consideration and kindness that you can possibly give him, and if poor he needs it all the more."

His mistakes were those of the head rather than of the heart, but unfortunately they were such as society generally makes the most of; he was generous, loved company, and cordially hated meanness. What he might have been those who knew him in life can now only conjecture; what he was he owed solely to his perseverance, industry, and manly self-dependence.

REPORTED MORTALITY FOR THE WEEK ENDING JUNE 7, 1879.

Cities.	Popula- tion estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from					
				The Pri- nci- pal "Zymo- tic" Diseases.	Pneumo- nia.	Diarrho- eal Diseases.	Diphtheria and Group.	Scarlet Fe- ver.	
New York.....	1,085,000	490	23.55	18.87	7.55	3.47	3.06	6.33	
Philadelphia.....	—	274	—	11.31	3.65	4.74	2.19	3.21	
Brooklyn.....	564,400	171	15.79	21.06	7.02	5.26	5.85	4.68	
Chicago.....	—	108	—	14.81	9.26	—	7.41	2.78	
St. Louis.....	—	132	—	18.18	2.27	12.12	.76	.76	
Baltimore.....	365,000	125	17.85	19.20	2.80	8.00	4.80	1.60	
Boston.....	360,000	133	19.26	12.78	6.77	5.26	3.76	.76	
New Orleans.....	—	88	—	12.60	3.41	10.23	2.27	—	
Cincinnati.....	—	84	—	26.19	5.95	2.38	3.57	14.28	
District of Columbia...	160,000	85	27.69	27.06	3.53	18.82	2.35	3.63	
Cleveland.....	—	41	—	9.76	14.63	2.44	—	4.88	
Pittsburgh.....	—	39	—	17.44	10.26	2.56	5.13	5.13	
Buffalo.....	—	30	—	63.33	3.33	6.67	23.33	13.33	
Milwaukee.....	—	37	—	13.90	10.81	—	16.21	—	
Providence.....	101,000	24	12.39	25.00	—	4.17	16.67	—	
New Haven.....	60,000	16	13.90	12.50	—	—	12.50	—	
Charleston.....	57,000	39	35.66	10.26	2.56	5.12	—	—	
Nashville.....	27,000	12	23.17	16.67	—	16.67	—	—	
Lowell.....	53,300	14	13.69	14.29	—	7.15	7.15	—	
Worcester.....	52,500	13	12.91	15.38	7.69	—	—	—	
Cambridge.....	51,400	10	21.29	14.29	4.76	4.76	—	4.76	
Fall River.....	48,500	10	10.75	20.00	10.00	—	—	20.00	
Lawrence.....	38,200	13	17.75	23.07	7.69	—	—	7.69	
Lynn.....	34,000	13	19.94	15.38	—	—	7.69	—	
Springfield.....	31,500	9	14.90	44.44	—	—	22.22	22.22	
New Bedford.....	27,000	10	19.31	—	—	—	—	—	
Salem.....	26,400	10	19.75	10.00	—	—	10.00	—	
Somerville.....	23,300	5	11.17	20.00	20.00	—	—	—	
Chelsea.....	20,800	2	5.01	100.00	—	—	50.00	—	
Taunton.....	20,200	5	12.91	—	20.00	—	—	—	
Holyoke.....	18,200	8	22.92	12.50	—	—	—	12.50	
Gloicester.....	17,100	4	12.20	—	25.00	—	—	—	
Newton.....	17,100	5	15.25	—	20.00	—	—	—	
Haverhill.....	15,300	10	34.08	50.00	10.00	—	50.00	—	
Newburyport.....	13,500	4	15.45	—	—	—	—	—	
Fitchburg.....	12,500	1	4.17	—	100.00	—	—	—	

Two thousand and eighty-five deaths were reported: 382 from the principal "zymotic" diseases, 347 from consumption, 121 from pneumonia, 110 from diarrhoeal diseases, 90 from diphtheria and croup, 83 from scarlet fever, 42 from bronchitis, 28 from typhoid fever, 24 from whooping-cough, 13 from cerebro-spinal meningitis, 11 from malarial fevers, 10 from measles, six from erysipelas, five from remittent fever, four from pleurisy, one from intermittent fever and one from typho-malarial fever, none from small-pox (five cases are reported from Richford, a small town in the extreme north of Vermont). In the mortality from measles, cerebro-spinal meningitis, diphtheria and croup, whooping-cough, typhoid fever, pneumonia, and bronchitis, there is no noteworthy change; the decrease in scarlet fever and erysipelas continues; there is a slight increase in consumption, moderate from "zymotic" diseases and all causes, while the fatality from diarrhoeal diseases is nearly double that of the previous week. In the nineteen cities of Massachusetts, with an estimated population of 880,850, there is shown a gradual increase in diarrhoeal diseases, a decrease in scarlet fever, and no other noteworthy change.

From *bronchitis*, 18 deaths were reported in New York, six in Brooklyn, four in Philadelphia and Boston, two in Milwaukee, one in Chicago, St. Louis, Baltimore, District of Columbia, Buffalo, Providence, Cambridge, and Salem. From *typhoid fever*, ten in Philadelphia, four in New York and Chicago, three in Cincinnati, two in Boston and Lawrence, one in Baltimore, Buffalo, and Cambridge. From *whooping-cough*, eight in New York, two in Philadelphia, Brooklyn, and Charleston, one in Chicago, St. Louis, Baltimore, Boston, Cincinnati, District of Columbia, Pittsburgh, Buffalo, Providence, and Chelsea. From *cerebro-spinal meningitis*, two in Baltimore, Buffalo, and Worcester, one in New York, Philadelphia, Cincinnati, Cleveland, Milwaukee, Lynn, and Somerville. From *malarial fevers*, seven in New York, five in Brooklyn, four in St. Louis, one in Baltimore and District of Columbia. From *measles*, six in New York, two in Cleveland, one in Brooklyn and Baltimore. From *erysipelas*, two in Buffalo, one in New York, Brooklyn, St. Louis, and Boston. The death-rate of the colored population in the District of Columbia was more than double that of the whites.

The weather was generally reported cooler and changeable, with light rains, the meteorological record for the week in Boston (latitude 42° 41', longitude 71° 4') being as follows:—

		Barom-eter.		Thermom-eter.		Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
Date		Mean.	Mean.	Maximum.	Minimum.	7 A. M.	9 P. M.	9 P. M.	Mean.	7 A. M.	9 P. M.	9 P. M.	7 A. M.	9 P. M.	9 P. M.	7 A. M.	9 P. M.	9 P. M.	Duration.	Amount in Inches.
June	1	29.913	83	96	67	77	35	59	57	SW	SW	SW	10	16	12	C	F	C	—	—
"	2	29.916	79	91	65	72	55	88	72	W	W	NE	6	12	14	F	O	R	—	.03
"	3	29.978	59	85	49	100	100	100	100	E	NE	NE	15	14	9	R	R	R	—	.50
"	4	29.865	65	88	51	100	97	91	86	O	S	SW	9	7	4	R	R	F	—	.88
"	5	29.833	68	78	56	77	83	77	69	SW	SW	SW	6	12	1	F	O	F	—	.48
"	6	29.794	66	77	53	72	74	55	67	O	O	W	0	6	20	O	F	F	—	.35
"	7	30.014	54	62	45	65	28	56	49	NW	NW	W	15	17	4	C	F	F	—	.95
Week.		29.916	64	96	45				73	SW			1629 miles.						45	2.3

¹ O, cloudy; C, clear; F, fair; G, fog; H, hazy; S, smoky; R, rain; T, threatening.

For the week ending May 17th, in 144 German cities and towns, with an estimated population of 7,315,369, the death-rate was 28.4, an increase of 0.1 over the previous week, indicating a decrease in consumption, diphtheria and croup, and typhus fever, an increase in scarlet fever, measles, and typhoid fever, while the other prominent diseases remained about the same. Three thousand nine hundred and ninety-three deaths were reported: 590 from consumption, 507 from acute diseases of the respiratory organs, 211 from diarrhoeal diseases, 102 from diphtheria and croup, 62 from typhoid fever, 61 from scarlet fever, 56 from whooping-cough, 45 from measles, 21 from puerperal fever, seven from typhus fever, two from

small-pox (Berlin and Augsburg). The death-rates ranged from 14.7 in Mannheim to 45.4 in Augsburg. Königsberg 32.2; Dantzic 21.2; Breslau 30.6; Munich, 40.5; Dresden 27.8; Cassel 20.2; Berlin 24.4; Leipzig 24.6; Hamburg 31.3; Hanover 27.8; Bremen 30.4; Cologne 24.6; Frankfort-on-the-Main 23.9; Darmstadt 19.7. Also for the same week, Vienna 33.6; Prague 44.4; Paris 27.7; Odessa, 30.7.

For the week ending May 24th, in the 20 English cities and towns having an estimated population of 7,383,999, the death-rate was 21.4, a decrease of 1.0 from the previous week, with a decline in the mortality from respiratory diseases, diphtheria, scarlet fever, and fever; a very slight increase in measles and whooping cough, considerable in diarrhœa, and nearly trebled in small-pox (London). Three thousand and twenty-nine deaths were reported: 327 from diseases of the respiratory organs, 109 from whooping-cough, 79 from scarlet fever, 75 from measles, 38 from fever, 35 from diarrhœa, 17 from small-pox, 12 from diphtheria. The death-rates ranged from 16.3 in Brighton to 25.1 in Norwich; 21.6 in London; 17.4 in Bristol; 23.1 in Birmingham; 23.8 in Liverpool; 24.1 in Manchester; 18.6 in Leeds. In Edinburgh the rate was 24; in Glasgow 21, in Dublin 35 (small-pox declining).

The sanitary condition of Astrachan and vicinity is reported to be good; typhus fever has become less prevalent. There is a slight increase in small-pox in the large cities of Europe where it prevails, and a decrease in Poland.

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LECTURES.

CLINICAL LECTURE ON EMPYEMA.¹

DELIVERED AT THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF
THE CITY OF NEW YORK.

BY PROFESSOR ALFRED L. LOOMIS.

GENTLEMEN, — I have thought it well to bring two cases before you together to-day, as it will, I believe, be interesting and instructive to study them in connection with each other. The first patient is a young man just about reaching adult life, and I will now ask him a few questions about himself.

How long have you been sick? "Since the 2d of January last." (That is, about four months.) What have you complained of? "I had pneumonia." How do you know this? "The doctor told me that I had." How were you taken at first? "Well, I was out on New Year's, and the next day I was sick in bed." Did you have a chill at first? "No." Did you have any pain? "Yes, a good deal." Where was it situated? "In the left side." Any fever? "Yes, quite a high fever, I think." Did you have any spit? "Yes." What color was it? "White." Was it ever any other color than white? "Yes, part of the time it was reddish." Was this reddish color mixed through it, or in streaks? "In streaks." How long did you continue to spit up phlegm? "About a week." Did it hurt you to lie on either side? "Yes." Which? "Both sides, and so I had to lie on my back." How long were you confined to bed? "The whole month of January." How have you been getting along since then? "Some time since I found that there was a lump in my left side. This, it seems, was a gathering, and after a while it broke." How long did the discharge of matter continue? "It has been coming ever since." Is the discharge now more or less free than it was soon after the gathering broke? "There is more coming now than there has been at any other time."

In like manner I will endeavor to get some idea of the history of the second case from the patient, who is, as you perceive, a man in middle life. How long have been sick? "Since the first of last September."

¹ Reported for the JOURNAL.

(That is, about eight months.) How were you taken? "With pain in the left side." Did you have a chill? "No." Any cough? "No." How long did the pain continue before you got relief? "Two weeks." Did you spit up any phlegm? "No." Could you lie equally well on either side? "I could sleep only on the left side." Have you lost any flesh since? "Yes, a good deal." Have you had any sweating? "Not until the present time. During the last two nights I have noticed this."

Now, having heard the above histories, what would you say was the matter in these two cases, Mr. A? "Pneumonia in the first, and pleurisy in the second." Well, let us see. The first patient now being stripped, we find that on the left side of the chest, about three inches below and a little to the left of the nipple, there is a fistulous orifice, from which there is constantly escaping a certain amount of discharge. On examining the rest of the thorax externally, we find that there is a very marked falling in under the left clavicle, and that there is an equally great, if not even more marked, retraction on the same side posteriorly in the upper portion of the chest. You will notice, furthermore, that during respiration, while the right scapula moves very freely, the left remains in a perfectly fixed position. In front, also, there is the same difference in movement between the two sides during respiration. Finally, we find that the apex-beat of the heart, instead of being in its normal situation, is almost directly under the right nipple.

What would you take to be the cause of this displacement of the heart, Mr. A? "The abscess that is here present." Where do you suppose that this abscess is situated? "In the chest walls." If you will reflect a little I think you will come to the conclusion that no abscess merely in the chest wall could possibly push the heart over to such an extent as is here the case. What do you think about it, Mr. B? "I should suppose that there had been a pleurisy complicated with pericarditis, that adhesions between the pleura and pericardium had resulted from this, and that consequently the heart had been drawn out of place." The great objection to this view of the case is that it is evidently the left side of the chest that is affected here, while the pleurisy must necessarily have been on the right side, in order that the heart should be drawn towards the right by adhesions between the pericardium and pleura. What is your opinion, Mr. C? "I believe that this is a case of empyema of the left side, and that the heart has been pushed over to the right by the presence of such a large quantity of fluid in the left pleura." This looks as if we were getting at the true solution of the matter, and we will now, therefore, continue our exploration of the chest, and see if the physical signs confirm this view of the condition here present.

In the first place, we have complete flatness on percussion. When

we place the ear to the chest we find exaggerated respiration on the right side, and at the apex of the left lung feeble vesicular murmur; while below on this side, from about the level of the third rib, there is complete absence of all respiratory sounds. Vocal fremitus and vocal resonance are also entirely wanting below this level. The diagnosis is therefore very clear. The presence of empyema is of course confirmed by this external opening through the anterior chest wall, with constant discharge of pus. This is out of the usual position for such spontaneous openings, which is considerably higher up, although they ordinarily occur in front. The heart has been pushed over to the right by the amount of fluid that has been present, and has not yet returned to its normal position. It is altogether probable, however, that the displacement is even now considerably less than it was before the distended pleura was relieved by the drainage through the opening. Since this occurred the patient states that he has improved very much.

Now let us find out what the condition is in the second patient. In comparing the two cases we are at once struck with the difference in the appearances of the patients' chests. In the first we found the most marked retraction. In the second there is evidently a very considerable enlargement of the left side. In other respects, however, there are many points of resemblance; for here on the left side, as in the other case, we get perfect flatness on percussion and entire absence of vocal fremitus, vocal resonance, and respiratory murmur. The only difference is that in this case these signs extend all the way up to the apex. As a result of the long continuance of this large accumulation of fluid in the pleura, the patient is now very weak and short of breath, and during the last two or three days has begun to suffer from severe sweating. As to the diagnosis in this case, there can be no doubt that there is subacute pleurisy; and you will seldom have a better opportunity of seeing the bulging of the intercostal spaces of which you read in the books, which is here so marked as to amount to a positive deformity. Whether empyema has as yet supervened is at present uncertain, though it seems highly probable that it has. The pulse I find is now 124, and the temperature 101° F., which I think is enough to indicate the presence of pus, although it would be more clearly demonstrated if the temperature were a couple of degrees higher. Still, this amount of increase in the pulse and temperature, taken in connection with the time that has elapsed since the pleural effusion first took place, and the fact that sweating has recently made its appearance, would seem to leave but little doubt that the fluid here present is no longer of a serous character. The apex of the heart in this case is found over by the right nipple, which is a greater amount of displacement than was met with in the other patient, although it is probable that before the opening occurred through the chest walls it was even more marked in that instance.

These are two very good cases to study together, because they show the same disease in different stages. In the first the spontaneous opening occurred very early. I do not understand exactly why this should have been the case, but I have found that such an early spontaneous evacuation is very apt to occur in the younger subjects of empyema. In this case the inflammatory process in the pleura was a rapid one; while in the second it has been much slower, and, indeed, probably subacute from the first. I do not suppose that it is the fluid itself that has changed here (in the second case), but rather the kind of inflammatory action in the pleura, which is now resulting in pus, instead of an effusion of serum, as at first. This second case shows the importance, therefore, of making a comparatively early opening where there is pleural effusion. The other warns us, however, that we should not interfere at too early a period, since a spontaneous opening of this kind is to be regarded as preferable to any artificial one that can be made. Here the point of opening is in a remarkably good position. The only unsatisfactory thing about it is that the aperture and passage are not quite free enough; but as there is no objection whatever to putting in a drainage tube in a case of this kind, the difficulty can be readily obviated. On the whole, the prognosis is very favorable, — decidedly more so, indeed, than in the second case.

In regard to the latter, the question now arises, Shall we make an opening in order to evacuate the contents of the pleural sac? This should certainly be done by all means, and the sooner the better. One great danger of delay in such a case as this is that sudden syncope is liable to occur at any time. The course which I would advise here would be as follows: At first to draw off by means of the aspirator as much fluid as would be well borne at one time by the patient, — perhaps about forty ounces. If the fluid were found to be serous in character, I would then rest content; but if it were purulent I would at once make a free opening in the chest wall and introduce a drainage tube. In the case of young subjects and where the affection is comparatively recent the aspirator is usually all that is required; but these older cases are not found to do well unless some more active interference than this is made. Here, if the patient still continued to run down after the drainage tube had remained in position for some little time, I should raise the question of the advisability of removing one or two ribs. This would allow the chest wall to sink in to a greater extent, and thus, meeting the slowly expanding lung, diminish the large cavity which is now present, the lower portion of which would also probably become obliterated in consequence of the operation. If the discharge from the pleural sac were offensive, it would be necessary to keep it washed out with some appropriate disinfectant by means of the drainage tube.

In young subjects the chances are four out of five that the patient

will recover when a spontaneous opening takes place, and in cases of all kinds three out of five. In the first of the cases that have now been presented to you the lung is already expanding in the upper part of the chest in as favorable manner as we could expect, and the process will be accelerated when a drainage tube has been put in. There are doubtless adhesions here between the pleura of the affected side and the pericardium, and by means of these the displaced heart will be drawn over towards the left as the cavity diminishes in size. If, in addition, there were adhesions between the surfaces of the pericardium, we should expect that some displacement to the left would probably occur eventually.

But to return to the second case. Would it not be just as well to employ the trocar at once instead of the aspirator? Certainly not, in my opinion. All authorities to the contrary notwithstanding, I decidedly prefer that air should *not* enter the pleural cavity in cases where there is the faintest possibility of the fluid still remaining serous. Where the contents of the cavity have hitherto been serum, and air is introduced, it is pretty sure to change the character of the inflammatory process present, and instead of simply serum we have pus to deal with in the future. Where a free opening is immediately desirable on account of the urgency of the symptoms, and there is no longer any doubt about the presence of pus, of course that is a different matter. Both these cases are especially interesting, because you will all meet with plenty of similar ones in your practice; and I should be very much ashamed of any of you who should ever fail to detect the presence of fluid in the pleural cavity after being taught here how simple and unmistakable the signs are which indicate this condition. An abscess in the cellular tissue of the chest walls, for instance, such as an inexperienced observer might at first suppose to be the cause of all the trouble in the first case, could never possibly produce the displacement of the heart and other marks of pleuritic effusion which are here so pronounced.

The length of time that is required for recovery after a spontaneous opening has occurred is much greater than you would be likely to suppose unless you had had some experience in regard to the matter. If the young man now before you gets well within two years from the present time, it will be quite as much as we can expect. The only thing to do in the way of local treatment will be to maintain a free opening by means of drainage tubes, and if at the end of two years there is found to be no discharge at all he may be regarded as over his trouble. Should the opening be allowed to close up temporarily, however, the result would no doubt be a large accumulation of pus, and the prognosis would become much more grave. Such openings, if left to themselves, are very apt to close prematurely when the discharge gets to be much diminished in quantity, on account of the tortuous character of the

passage leading to the cavity. By the patient's constantly wearing a drainage tube, however, the possibility of the occurrence of such an accident is effectually guarded against, and when the discharge has become comparatively small a little rubber cup for receiving it may be attached to the end of the tube, which will give rise to little or no inconvenience. In addition, we should do all that is in our power to build up the general health of the patient, and a change of air is often of very great service. In most cases a locality where there is an elevation of from a thousand to fifteen hundred feet (not enough to put too much of a strain upon the unaffected lung) will be found to be very beneficial, as respiration can be more easily performed at such an altitude. The patient should remain in the open air as much as possible, but should avoid too violent exercise and all forcible expansion of the chest until he has almost completely recovered. Riding will be of service in exercising the muscles and distending the lungs, and the kind of exercise which is of the greatest amount of benefit in pleuritic troubles is riding a fast-walking horse. Of course, the most nutritious diet should be employed, and as far as direct medication is concerned cod-liver oil, iron, and similar agents will be found most useful.

STRICTURE OF THE PROSTATIC URETHRA.

BY CLAUDIUS H. MASTIN, M. D., LL. D. UNIV. PENN., MOBILE, ALA.

ALMOST every surgeon who has had any experience with urethral diseases will call to mind how frequently he has been consulted by patients who come from under the care of their regular medical adviser with the statement that they are suffering with stricture, and that "the stricture is just at the neck of the bladder;" still he knows how very seldom it is we find the contraction lower down the penile urethra than some four to four and a half inches, — indeed, rarely even so low as the bulbo-membranous junction. In fact, it may with safety be stated that *the great majority of strictures* are located in the anterior portion of the canal, that few are ever so far down as the bulbo-membranous junction, and fewer still in the membranous urethra. In a word, we may assert that the further we go from the external meatus the less frequently do we encounter true organic stricture of the urethra.

Although surgeons differ widely as to the precise location in which we oftenest find the contraction, still they are a unit as to its infrequency in the deep urethra, — and justly so, for being the result chiefly of urethral inflammation, we naturally expect to meet with it at that point in the canal where the inflammation first began, where it was most intense in its action, and where it lingered longest in its duration; and as that portion of the canal is bounded by the external urethral

meatus on the one side, and a point four to four and a half inches distant on the other, it is within this space that we would most reasonably expect to find the obstruction, should one exist.

Sir Henry Thompson, than whom there is no sounder authority upon genito-urinary pathology living, writes: "Most rarely is any stricture found in the membranous portion, and never in the prostatic portion." Again: "I may confidently assert that there is not a single case of stricture in the prostatic portion of the urethra to be found in any one of the public museums of London, Edinburgh, or Paris. I am disposed to believe that some observers have been deceived in reference to it, or that it owes its supposed existence to inferences drawn from the results of examinations of the living body, which can by no means be admitted as evidence upon this subject."

In the face of this assertion of Sir Henry, we have the positive assurance from Leroy d'Etoilles¹ and from Philip Ricord, both of whom were eminent in this department of surgery, that they have respectively met with stricture of the prostate; and Leroy had at that time in his possession a specimen showing the contraction located within the otherwise healthy prostate. In addition to this we find a paper from the pen of Mr. Walsh, published in the *Dublin Medical Press* of January 26, 1856, in which he states that he had examined a specimen of this nature which was preserved in the Museum of the Royal College of Surgeons of Dublin, the disease having begun in the posterior portion of the membranous canal and extended itself into the prostatic urethra, where it resulted in a well-defined stricture.

Although Sir Henry is not disposed to accept these as perfectly reliable cases, he yet seems to think the existence of prostatic stricture mainly rests upon the observations of Leroy and Ricord. He prefers to consider it possible that certain enlargements of the prostate, which sometimes narrows and frequently renders tortuous that part of the urethra which passes through that organ, may have given rise to a condition easily mistaken for stricture; but that the organic narrowing of the urethra only, that narrowing which commences within its own walls, and which we understand to constitute the stricture which affects all other portions of the urethral canal, is not found in the prostate.

Based upon the authority of this eminent special surgeon, the opinion has become fixed in the minds of the best informed surgeons of this country, as well as of Europe, that we do not meet with prostatic stricture; and that those cases which have been reported as such admit of a reasonable doubt as to whether or not the precise locality of the contraction was accurately demonstrated.

In view of this fact I almost hesitate to place upon record the following history of a case which has been of especial interest to me, and

¹ Des Rétrécissements de l'Urètre, etc., Paris, 1845, pages 82, 83.

which I feel assured will not prove uninteresting to that class of my readers who are giving their attention to the subject of genito-urinary surgery.

J. J. B., aged forty-six years, came to Mobile from North Carolina on the 18th day of June, 1877, for the purpose of consulting me as to the propriety of an operation for stricture of the urethra. His history was briefly as follows : In 1856 he contracted his first blennorrhagia, and subsequently in 1861 a second case. In both instances he was treated with strong injections of nitrate of silver, from which he suffered a great deal of pain and inflammation. In 1862 he first discovered a diminution in the size of his stream of urine, which gradually lessened, until, in 1871, he was suddenly seized with complete and perfect retention, from which he was relieved only by forcible catheterismus. After this attack he passed along with comparative comfort, although still with difficulty in micturition, until 1874, when the stricture had again closed so completely that his retention was absolute, and he resorted anew to the forcible introduction of the catheter for relief ; from this date his stream gradually diminished in size until his arrival in Mobile in June, 1877.

The fatigue incident to a long trip by rail, at a season of the year when we were having our most intensely heated term, had so exhausted him that I considered it the part of prudence to wait a few days until he could recuperate sufficiently for me to make an exploratory examination of his urethra. The day after his arrival, however, he was again taken with partial retention, and I was forced to try to evacuate his bladder with the catheter ; this I failed to introduce, and succeeded in relieving him only by the use of opium, hot baths, etc., so that he could by drops overcome the excessive distention of his bladder.

Repeated examinations of his urethra showed that a sound of twenty-one millimetres — equal to about $11\frac{1}{2}$ English — could be introduced with perfect ease down the urethra to the distance of seven and a quarter inches, and that, too, without any stretching of the penis or distention of the canal. Beyond this distance it was impossible to pass the sound : and even when I had recourse to the smallest filiform whale-bone probes which have yet been constructed, also to those of silk-worm gut, not over one third of a millimetre in diameter, I found it impracticable to effect an entrance into the bladder. His urine was voided only by drops, and for weeks prior to his coming to Mobile he had been unable to pass a stream even of the smallest dimensions.

Having carefully examined the entire canal, not only with the ordinary sound, but with the ball probe, and the urethra metre (of Dr. F. N. Otis, of New York), I found its normal calibre to be thirty-two m. ; that it was free from contraction at all points, from the apex of the prostate to the external meatus, save at one spot about an inch anterior to the bulb,

where it was narrowed to twenty-one and a half millimetres. With this state of affairs, — an open urethra showing a normal calibre of thirty-two m., through which a sound of twenty-one and a half millimetres was easily passed to the distance of seven and a quarter inches, and still no urine being expelled from the bladder save by drops, — I considered myself justified in diagnosing the case one of stricture of the prostate. And that diagnosis was based upon the measurements of the length of the average urethra, as given by Sir Henry Thompson,¹ which are as follows: —

" Total length, from anterior border of uvula vesicæ to meatus urina- rius externus		8½ inches.
Dividing the canal in the usual manner into spongy, membranous, and prostatic portions, we have —		
Length of spongy portion		6½ inches.
" " membranous ditto		¾ inch.
" " prostatic ditto		1¼ inches.
Total		8½ inches."

If this be the usual average length of a normal and healthy adult urethra, without stretching, and in the case given I was enabled to insert the sound of twenty-one and a half millimetres to the depth of seven and a quarter inches without obstruction, but beyond which point it was impossible to pass the smallest urethral instrument which as yet has been constructed, it is obvious that the impediment which did exist to the passage of both the urine and the filiform sound was situated somewhere within the last one and a quarter inches of the urethra; and as that distance is comprised within the prostatic urethra, it is safe to assert that the stricture was within the prostate. How far correct this diagnosis was I think will be proved by the succeeding history of the case.

Unable to effect the passage of any instrument into the bladder, I determined to operate by external perineal urethrotomy without a guide, as follows: On the 16th day of July, nearly a month after his arrival in Mobile, and after the usual preliminary preparation, I opened the membranous urethra upon the point of a staff just in front of the apex of the prostate, and holding the edges of the wound apart with the excellent contrivance of Mr. Avery, of Charing Cross Hospital, London, I placed my finger accurately against the point of the prostate to satisfy myself that there could be no possible mistake as to the exact locality of the stricture. Finding that the obstruction was clearly and unmistakably within the prostatic urethra, I at length succeeded, after long and patient endeavors, in passing an Anel probe through the coarctation on into the bladder; having removed this, I passed through the incision and into the prostatic canal a very small silk-worm gut

¹ The Pathology and Treatment of Stricture of the Urethra and Urinary Fistulæ. By Sir Henry Thompson, F. R. C. S. London. 1869. Page 3.

conductor attached to the staff of a Maisonneuve urethrotome, which was carried into the bladder, and the obstruction freely cut by the passage of the blade. The case progressed without anything worthy of note, and by the 25th of July the external wound having so far healed that I determined to cut the contraction, which has been mentioned as existing just above the bulb. This was accomplished with the dilating urethrotome of Dr. Otis, and the canal at that point restored to its normal size of thirty-two m. French.

The subsequent treatment consisted in keeping the urethra free by the regular introduction of a sound of this size until all the parts were thoroughly healed, and the patient left for his home on the 3d of August, with a urethra free from contraction or disease, and able to insert without force or pain a thirty-two m. steel sound evenly into the bladder.

Owing to the extreme rarity of stricture in the deep urethra, and the doubt which exists in the minds of the best-informed surgeons of the day as to whether it is ever found in the prostate, I have thought it would be proper to place this case upon record. As to the correctness of the diagnosis I feel certain no doubt can exist, and I am assured that when we take the measurements of an average normal urethra, which, according to the highest authority upon this subject, Sir Henry Thompson, is eight and a half inches, the penetration of a sound without force or stretching of the canal to the depth of seven and a quarter inches is a reasonable proof that its point has reached the apex of the prostate. Such being true, the case is made still stronger by the fact that when the membranous urethra was opened I was enabled to place the point of my index finger evenly and squarely against the apex of the gland. Now, although the eminent British surgeon asserts that some observers — referring to Leroy and Ricord — have been deceived in reference to this affection, and “that it owes its supposed existence to inferences drawn from the results of examinations of the living body, which can by no means be admitted as evidence upon this subject,” I feel that when in addition to the measurements of the canal by his own rule, as to length, I bring to bear the further proof, as demonstrated by the eye and the touch through an opening made directly upon the point of the gland, I am justified in making the positive assertion, “from the results of examination of the living body,” that this stricture was situated within the prostatic urethra. If, then, it be granted, — and it cannot be denied that the obstruction was in the prostate, — it may be urged in argument against me that this was one of those cases mentioned by Sir Henry “where certain enlargements of the prostate, which sometimes narrows and frequently renders tortuous that part of the urethra which passes through that organ, may have given rise to a condition easily mistaken for stricture.”

To guard this point, I was very careful to examine the outlines of the prostate with the finger in the rectum and the *sonde coudée* of Mercier in the bladder; the result was that I found the prostate small, with no evidence of disease. If any change existed, it consisted in the diminished size of the gland, which was so marked that I called the attention of the gentlemen who were assisting at the operation to the fact.

The probability is that the patient had in the first instance a prostatitis, and when he was taken with retention the forcible introduction of the catheter lacerated the urethra, and subsequently a deposit of in-molecular tissue took place, which in time narrowed down and finally blocked up the channel. The case is interesting mainly to the extent of showing that although stricture of the prostatic urethra is exceedingly rare, it is nevertheless by no means impossible that such a contraction may take place, and that, too, independently of any of those enlargements, either centric or eccentric, to which the prostate is so liable.

MOBILE, April 1, 1879.

RECENT PROGRESS IN OTOLOGY.

BY J. ORNE GREEN, M. D.

Opening the Mastoid Process by Surgical Procedure.—In previous reports mention has been made of articles by Professor Schwartze on this subject, which have been appearing in the *Archiv für Ohrenheilkunde* since 1872. They are now completed, and form a most valuable and scientific investigation of the whole subject based on his observation of fifty cases.

He begins with a review of the history of the procedure which was known for a long time as Jasser's operation, from Dr. Jasser, a Prussian military surgeon who performed it in 1776. In reality, however, it had been performed already by J. L. Petit, who died in 1750; he bored through the healthy bone and evacuated decomposed pus from the mastoid cells, and seems to have partially appreciated the value of the operation both on caries of the mastoid and on chronic otorrhœa. Jasser, almost accidentally, opened a carious mastoid with a probe, and was greatly shocked to find that water syringed into the opening ran from the nose; but as the result of the procedure was very favorable upon the ear disease he did the same operation upon the other ear, with the result of curing the chronic otorrhœa which existed there. Great expectations were now formed that the operation would relieve all forms of deafness, but on account of disappointment in this respect it soon fell into disrepute, yet was tried occasionally as a last resource, till Von Bergen, a prominent Danish physician who desired it performed on himself as a relief to deafness, dizziness, and subjective noises, died from purulent meningitis, the result of perforating the brain instead of the mastoid

cells. After this the operation was forgotten for several decades, till revived by Forget (1849) in cases of caries, and by Von Troeltsch and Follin (1859). Numerous cases of its adoption, mostly for the relief of caries of the mastoid with threatening fatal symptoms, followed till 1861, when Von Troeltsch proposed the operation for the relief of some obstinate otorrhœas.

To establish its value in the different varieties of disease of the mastoid, and the best method of doing it, was the task Schwartze set before himself by accurately recording in chronological order any and every case of the operation which he himself performed, together with any peculiarities in each case. Save the first, the articles contain the histories of the cases in all important particulars, together with the results a long time after treatment.

The last article includes the conclusions drawn from the whole series of fifty cases. Of these were, —

Cured	35 cases = 70 per cent.
Uncured	5 " = 10 " "
Died	10 " = 20 " "

The of causes death were: meningitis two, meningitis tuberculosa one, pyæmia two, abscess of cerebellum one, anæmia one, epithelioma of bone one, tuberculosis pulmonum two. Of these ten cases, the fatal disease certainly was wholly independent of the operation in six; in three the connection of the operation with the death seems very uncertain; and in one it was undoubtedly the direct cause of death, the dura mater being perforated by a splinter of bone during the operation, causing traumatic meningitis. The cases show, as Schwartze says, that it is in this way possible to cure the severest forms of caries, even of the petrous bone. The cases are also interesting as showing the effect of curing the chronic ear disease upon the general health. In one case chronic and very alarming debility was completely relieved; in two the favorable effect upon tuberculosis pulmonum was very marked; in one epilepsy was permanently relieved; in two facial paralysis was cured.

The effect upon the hearing of course depended upon the amount of destruction which had taken place before the operation: in eight it became perfectly normal; in twenty-three was very much improved; in four absolute deafness remained, the result of previous destruction of the labyrinth by caries.

The ages of the patients were: one year to ten years twelve, eleven to twenty years sixteen, twenty-one to thirty years thirteen, thirty-one to forty years one, forty-one to fifty years three, over fifty years five. The oldest was seventy-two years of age, the youngest two.

As indications for the operation are given, first, acute inflammations of the mastoid cells with retention of pus, where Wilde's incision or treatment with ice does not relieve the œdema, pain, and fever. Second,

cases in which there is intermittent swelling over the mastoid and fistulous openings in the skin, or where, in other words, nature is evidently endeavoring to effect an opening through the bone; in these cases the operation should be performed before symptoms threatening to life set in. Third, cases in which there is fluctuation beneath the cutis of the upper posterior wall of the meatus, corresponding to the floor of the antrum, or where a fistulous opening has already formed at this spot the operation should be performed without hesitation if brain symptoms are noticed. Fourth, distinct caries of the mastoid, of the mastoid and tympanum, and of the osseous labyrinth all indicate the operation, which should not be neglected even in the worst cases, as experience shows that even the whole labyrinth may be removed by necrosis, and yet the cavity fill up with healthy granulations which gradually ossify, and the otorrhœa is cured.

In cases where sequestra exist in a mastoid without external symptoms Schwartz considers the operation useful, but the difficulty is in making the diagnosis of this condition. Pain, fever, and a decidedly offensive odor to the otorrhœal secretion, in spite of the most careful cleansing and disinfection of the tympanum and Eustachian tube, point to the existence of retained pus in the cells.

The operation as a prophylactic measure merely, to relieve chronic suppuration of the tympanum, and to avoid the possible dangers of pyæmia, meningitis, and tuberculosis as suggested by Von Troeltsch and Jacoby, is considered by Schwartz of doubtful justification, on account of the risks of the operation and the possibility of anomalies in the formation of the parts involved. The operation is, however, an *indicatio vitalis* in these cases whenever symptoms of irritation of the brain are noticed.

Dividing the operations according to the conditions found, we have, —

I. Acute inflammation of the mastoid process without external abscess, cured eight, uncured one, died two, = eleven cases.

II. Inflammation of mastoid with external abscess or fistulæ, cured eighteen, uncured two, died five, = twenty-five cases.

III. Inflammation of mastoid, external wall healthy, the operation being an *indicatio vitalis*, cured two, uncured one, died none, = three cases.

In regard to the operation, after exposing the bone thoroughly and checking the bleeding, one of two conditions will be found: either the bone is softened by caries or contains fistulæ, or else the bone is healthy or sclerosed. If carious nature has already pointed out the direction for the operation, all softened bone should be removed with a gouge; fistulous openings should be enlarged with the hammer and gouge, till, if possible, the little finger can be inserted into the cells. If sequestra exist they must be removed, and all fungous granulations should be

scraped away with a sharp spoon. The wound should then be cleansed thoroughly, disinfected with a two per cent. solution of carbolic acid, and a drainage tube inserted, which may be carried out through the meatus if a fistula connects with that passage.

Where the bone is healthy or sclerosed, Schwartzé prefers the use of the gouge or chisel and hammer to either trephine or borer, and the opening should be funnel-shaped, large externally, and gradually smaller, as thus better drainage is secured, and the risk of septic infection from the wounded surface is diminished. The opening should be made at the height of the meatus, and, to avoid the lateral sinus, should run inwards, forwards, and downwards, parallel with the meatus. The chief caution to be observed is to avoid the lateral sinus.

The after-treatment is extremely tedious, and requires considerable manual dexterity: the cavity should be washed with a warm solution, three fourths per cent. salt and one per cent. carbolic acid, and in some cases it is days before the inspissated pus is thoroughly washed out; the meatus must be kept free, inflation by the catheter used, and granulations either in the meatus or wound destroyed as occasion requires. The drainage tube must be renewed daily at first, but can afterwards be replaced by leaden plugs to keep the wound open. These should not be removed permanently till the suppuration in the depth of the ear is reduced to a minimum, and till the meatus is free from granulations and swelling.

Little febrile reaction was noticed in Schwartzé's cases after the operation, but he recommends restricted diet, the use of the ice-bag for a time, and that the patient keep in bed till all fever is gone.

Past experience shows that the dangers from the operation itself are pyæmia, exposure of the middle fossa of the skull or of the lateral sinus; experience also shows that these two accidents last named may occur without injurious effect if the dura mater and sinus are uninjured, and they may unexpectedly happen to the most careful surgeon from a malformation of the bone, which is, however, extremely rare.

PROCEEDINGS OF THE ESSEX NORTH DISTRICT MEDICAL SOCIETY.

THE annual meeting of the Essex North District Medical Society was held in Haverhill, May 7th, Dr. W. H. Kimball, president, being in the chair. After the usual routine of business was completed, the society listened to a paper on Animal Heat and Fever, by Dr. E. P. Hurd, of Newburyport, corresponding secretary. The following is a synopsis.

The essayist, after a brief consideration of the nature, conditions, and theories of animal heat, said that to-day the chemical theory of Lavoisier demands our chief attention, for around it harmoniously gather all the facts of physiology and chemistry. The latest and most exact science testifies to the general

truth of the theory, although it has undergone important modifications since Lavoisier's time.

Lavoisier, in 1777, demonstrated the striking relations which exist between respiration and combustion, comparing the human body to a lamp whose *wick* (or point of combustion) was the lungs. Calorification was due to the combination of vital air (oxygen) with the base of fixed air (carbon) and inflammable air (hydrogen) furnished by the blood.¹ This view of Lavoisier, that the precise seat of organic combustions is the lungs, was combated by Lagrange, who showed that the lungs were not essentially hotter than other organs; by Spallanzani, who demonstrated that respiration goes on to some extent by the skin; by Williams Edwards, who showed that when frogs were confined in hydrogen gas they still generated CO_2 as proved by analysis of the excretions; and by Magnus, who analyzed the blood and obtained its gases, showing that oxygen and CO_2 exist in the blood, and the latter in greater proportion in venous blood.² (This seemed to show that the carbonic acid which is removed by the lungs is formed in the system at large.) It became then generally admitted that the lungs constitute only the place of exchange of gases; the *foyer* of organic combustions was in the tissues. The rapid emaciation attending fevers was remarked, and striking instances were recorded where for some hours after death bodily heat goes on augmenting.³

It is singular that the first experiments made to determine the source of animal heat should have given confirmation to the theory of Lavoisier that the lungs were the seat of organic combustions. Crawford in 1788, Scudamore in 1824, Krimer in 1823, Davy in 1815, Becquerel and Breschet in 1837, — these and other able experimenters found the temperature of arterial blood to be greater than that of venous by from half a degree to a degree or more. These experiments were made on animals recently killed, and were erroneous and unreliable, as shown by G. Liebig in a masterly treatise on animal heat published in 1854. He showed that it was necessary to operate on living animals. In opening the thorax you cool the contents of that cavity; and even if the thorax be not opened, if the animal have ceased to live, a stagnation of blood occurs, which changes the distribution of caloric. The older experimenters made much of thermometric observations of the blood in the cavities of the heart, in the veins and arteries, of animals on which they experimented after death. Liebig pointed out the fallacy of this mode of observation.⁴ He records many experiments of his own on living animals, which prove that venous blood is considerably hotter than arterial. Fick, in 1855, undertook like experiments with like results. Hering has published observations of a similar nature.⁵ In 1857 appeared a memoir by the late Claude Bernard, recording a long series of experiments confirmatory of the conclusions of Hering, Liebig,

¹ Longet, *Traité de Physiologie*, Paris, 1869. Tome ii., page 493.

² Claude Bernard, *La Chaleur Animale*, Paris, 1876. Leçon 2.

³ In one instance (observed by myself) the bodily heat, which was 107° at death, did not perceptibly decline from that point (as tested by the thermometer in the axilla) for three hours after life was extinct.

⁴ Claude Bernard, *loc. cit.*, page 43. The left side of the heart, being thicker than the right, is better protected against refrigeration, and arteries are, as a rule, thicker and better protected than veins.

⁵ Cited by Bernard.

and Fick, and establishing the theory of capillary combustions on a solid basis. Bernard operated, as Breschet had done, mostly with thermo-electric needles.

If the blood in the veins is hotter than the blood in the arteries, and the blood in the right side of the heart hotter than the blood in the left (as shown by the careful experiments with thermometric instruments of Bernard and others above mentioned), the presumption is that the chemical processes, of which heat is the expression, take place in the systemic capillaries, or in the cells of the tissues.

Bernard proved that thermogenesis is a phenomenon essentially *extra sanguine* by plunging his thermometric needles into solid tissues; the temperature of these parts was indicated, and this was compared with that of the entering artery and emergent vein, the result always being that the blood was cooler by some fractions of a degree than the organs which it traverses.¹ Indirect proof, a deductive kind, is found in the fact that animals, as zoöphytes, which have no blood, have a heat of their own which is higher than that of the surrounding medium; and even plants generate heat, as proved by experiments of Hubert, Vrolick, and Vriese.² From these experiments (some of which were quoted) the writer drew the important biological lesson that life and nutrition and the evolution of heat are inseparably associated. The essential characteristic of all living beings is nutrition, and this is composed of two factors exactly balanced, assimilation or organization, and disassimilation or disorganization. There is an outward movement of waste, and an inward movement of repair. Oxygen and pabulum are necessary adjuvants to these processes, which in health are exactly balanced, oxygen being the complement of the factor disassimilation, food being the complement of the other factor. The conclusion at which the essayist arrived, after further speculations as to the nature of calorifying processes in the animal system, was that the essential phenomena of life occur in plants and in animals that have no blood, but in the higher animals, a healthy circulation, bringing constant supplies of oxygen and pabulum, and conveying away the *débris* of the tissues, was necessary; it is in the cells that oxidation and calorification take place, and the condition of evolution of heat is the contact and exchange between the elementary tissues and the blood at the moment when the chemical acts of nutrition take place.

In answer to the question, What is the material constantly consumed in thermogenesis? it was considered problematical, as no one has ever explained the transformation of pabulum into bioplasm, or the steps attending disintegration of bioplasm or formed tissue. There is no doubt as to results. Tissue is consumed, and we trace its products in the excreta, and the animal body is kept for days at a nearly constant temperature, though not an ounce of food is taken during this time. (Allusion was made to the experiments on starvation performed by Chossat and Martins; these are recorded in the chapter on Animal Heat in Physiology of Common Life, by G. H. Lewes.) Liebig's classifi-

¹ Langeret, *loc. cit.*

² Langeret, *loc. cit.*, p. 427. Vrolick and Vriese have shown that concurrently with the elevation of temperature, which is manifested in the spadix of certain plants at the flowering season, oxygen disappears from the surrounding air, and is replaced by CO². The temperature of the spadices of *Arum Cordifolium* was found by Hubert to be twenty degrees above that of the circumambient atmosphere.

cation of foods into plastic and calorific was considered a convenient one, though open to grave objections; these are forcibly put by Lewes in the work above referred to. Yet nitrogenous articles are especially histogenetic, and fats and other ternary bodies are especially calorific, experiments by Flint, Jr., Pavy, and others having shown that the heat value of sugars, oils, etc., is greater than that of albumen. Experiments of Binz, recorded in the *Practitioner*, have proved that nearly all of the alcohol ingested is consumed in the system, and that its products are CO_2 and H_2O . By virtue of such decomposition, as much heat must be evolved as if the same quantity of alcohol were burned in a spirit lamp.

As to the seat of these combustions, the probabilities are all in favor of the view that they take place at the *foyer* of organic combustion generally, namely, the inmost recesses of the tissues, and under the excitation of nutritive or so-called vital force. We know that the chemico-vital processes on which heat depends are enhanced by food as well as by moderate quantities of alcohol, and there is reason to believe that in the destructive processes taking place in the tissues combustible food elements and alcohol participate; whether the latter retards the waste of the tissues, as some have taught, is known only inferentially.

It would be reasonable to expect that processes which in the recesses of the tissues give rise to normal heat should, when exaggerated, produce fever. There may be a more than ordinary loss of heat from the cutaneous surface by radiation and evaporation, and yet thermogenesis may be excessive, and may destroy life by its baneful effect on the tissues.

Theories of Fever. — The hypothesis of calorific nerves and nervous centres (supported by Bernard) was discussed, and shown to be destitute of proof; that of a primitive perturbation of the vaso-motor system was found to be equally wanting in solid foundation. In fevers the nervous symptoms are not constant, and when they occur they are secondary to the nutritive disorders. The abnormal heat is not due to simple paralysis of the sympathetic, for division of the sympathetic does not produce fever. The evidence all points to a pyretogenous cause at work in the blood, and, by its irritating effects on the tissues, exaggerating all calorific chemico-vital processes. In short, the *humoral* theory is the best. The *materies morbi* of fevers in general is unknown. The germ theory lacks inductive proof, and certainly cannot apply to sympathetic fever (from wounds or surgical operations, etc.), or to ephemeral or catarrhal fever. The hypothesis of a ferment in the blood, exciting and giving preponderance to disassimilation, is more probable; this ferment may be a chemical poison from the atmosphere, or it may be a morbid product of the system itself.¹

The effects of heat on the animal economy were next described, and allusion was made to experiments on birds, hares, dogs, etc., exposed to an elevated temperature. High heat is a veritable toxic agent. The animal is thrown into a high fever, and death takes place when the febrile heat reaches 116°F .

¹ I still cling (with diffidence that is characteristic of this expression of opinion) after a careful perusal of the able paper of Dr. Becker, in the *JOURNAL* for May 15th. As an effort of the scientific imagination (supported, I confess, by striking analogies) Dr. B's theory leaves nothing to be desired.

in birds, 110° in mammals. A fixed degree of temperature 4° or 5° above the normal soon kills. Thermogenesis is heightened by the stimulus of external heat, conducted by the blood from the periphery to the tissues and central organs; circulation and respiration are quickened. The animal dies agitated, panting, convulsed, with loud outcries. *Sectio cadaveris* shows the heart's action ceased, and the blood in the veins very dark; muscular rigidity speedily supervenes. The muscular system especially suffers from excess of heat, the muscles of organic life most of all. Heat is a paralyzer of the heart. This organ is most speedily and profoundly affected, but the voluntary muscles undergo serious lesions. High heat coagulates the muscular syntonine, and thus destroys the physiological function of the muscle. Long pyrexias induce fatty degenerations of almost all the tissues; the heart, the liver, the kidneys, the spleen, etc., undergo softenings, the nutrition and constitution of the anatomical elements under the toxic influence of heat having been profoundly altered.

Interesting experiments of Claude Bernard (section of the nerves of an extremity) have shown that the toxic effects of heat are exercised directly on the anatomical elements, and not through the intervention of the nervous system.¹ Fever being an exaggeration of the disassimilating processes of nutrition, the assimilating processes are lessened or suspended; hence the loss of appetite and arrest of digestion, etc. The tissue waste reveals itself in the high-colored urine, which has urea and uric acid in abnormal proportion.

In all febrile maladies the thermic cycle presents three periods or stages, — an initial or ascending period called “augment,” a stationary period called “fastigium,” a terminal period called “issue.” [The typical forms of these stages were described by the help of graphic representations which were exhibited to the meeting, the essayist remarking that no general work on practice had treated fevers, from the point of view of march of temperature, so scientifically and satisfactorily as that of Jaccoud.² He continued:]

Enough has been said to indicate what a fruitful field for observation and study the febrile cycle affords, and how indispensable for accurate diagnosis and prognosis is the clinical thermometer. We see, moreover, how absurd must be the notion that this orderly series of morbid changes can be much affected by small doses of sweet spirits of nitre, muriatic acid, and mindererus, and how infinitely more foolish the notion that the thermic oscillations can be in any way influenced by attenuated doses of rarefied moonshine, in the form of third dilutions of aconite and belladonna.

We are becoming more and more convinced that there is an orderly sequence of events in fevers as in all other phenomena of nature, that there is law and not disorder even in disease, and that human skill and knowledge are impotent materially to modify the course of febrile diseases. There will be occasions when your frail bark will be tossed on angry billows, when by adroit manœuvres you may avoid rocks and quicksands; there will be other occasions when the utmost you can do is to determine your bearings, your latitude and longitude, powerless even to guide the craft amid the raging storm.

¹ *Loc. cit.*, *Léçon 18.*

² The work by this author, *Pathologie Interne*, deserves translation.

"Nature with equal mind
Sees all her sons at play ;
Sees man control the wind,
The wind sweep man away ;
Allows the proudly riding and the foundered bark."

The treatment of fevers comprises the following principles: (1.) Eliminate the cause. (2.) Support the strength. (3.) Meet dangerous complications as they may arise. (4.) Rescue the organism from the baneful effects of the fever heat.

(1.) The first indication, to neutralize or remove the *materies morbi*, cannot be efficiently met, because we do not know what the *materies morbi* is. It may be an altered condition of the blood from cold or heat, or constitutional cachexia, or from retained excreta, the pyretogenous element acting as a ferment, poisoning the whole mass of the blood, and exciting to inordinate activity the organic combustions; it may be a living germ from the vegetal world, or a degraded form of bioplasm.

We are wholly in the dark on this subject, and therefore cannot intelligently combat the *materies morbi*. We are certainly not warranted, on the basis of positive knowledge, in dosing our fever patients with antiseptics and antizymotics with the intent to neutralize in the blood or destroy the fever ferment or fever germ. I cannot except the traditional chlorate of potash and euchlorine, permanganate of potash and salicylic acid, carbolic acid and sulpho-carbonylate of sodium, sulphurous acid and bisulphite of sodium, or even, in this connection, quinine and alcohol. Till we have positive knowledge, a judicious and respectful skepticism is our highest wisdom. Nevertheless, while we may not aim our shaft at an imaginary foe, we do well to keep the emunctories open, as there is reason to believe that through the ordinary channels of excretion the fever poison passes out of the system. It is certain that return to health is coincident with return to normal activity of the organs of secretion and excretion. Hence the continued use of the customary sweet spirits of nitre finds justification; the vinum ipecacuanhæ in diaphoretic or expectorant doses; the acetate, citrate, and bicarbonate of potassa, and other mild diuretics; and the occasional laxative of senna, rhubarb, castor oil, or buckthorn when the bowels are confined.

My own limited experience does not lead me to repose much faith in acnite or other nerve sedatives as febrifuges. It is very improbable that the morbid heat production is at all influenced by these drugs, or that they are in any marked degree antipyretic. (2.) The second indication, to support the vital forces, includes all food and stimulants, as well as the hypnotics and anodynes which you give to procure sleep and relieve pain and restlessness. Doubtless an important advance in rational therapeutics has been made since bleeding and depressants in the treatment of fevers were abandoned, since Todd taught us to use alcoholic stimulants more freely and Graves fed fevers. And yet just here caution and judgment are needed. I am convinced that many cases of continued fever do better without a drop of wine and only a moderate supply of liquid aliments. Others do better with a little wine or whisky every two, three, or four hours, and an abundance of pure milk. Sometimes it is advantageous to begin the stimulant treatment early, as where

the tendency to death is markedly by asthenia. We must combat the fever heat by our cold baths and quinine at the same time that we stimulate with alcohol. Restlessness, wakefulness, and delirium must be controlled by camphor and Dover's powder, or better still with chloral, or the bromides with hydrobromic acid. (3.) The third indication, to meet complications as they may arise, comprehends all those measures, medical and surgical, necessary to arrest hæmorrhages, check diarrhoea, stay the progress of ulcerations, etc., attention to which is necessary to save the life of the patient. (4.) The fourth indication, which we can happily do much to fulfill, is to restrain as far as possible morbid heat production, or save the tissues from its toxic effects.

[The writer here gave the degrees of fever heat which are fatal and those which are considered dangerous, citing Dr. Clifford Allbut, in *Braithwaite*, Part LXIX., page 24.]

Can anything be done to lessen heat production? Quinine in large doses is, I believe, the only safe antipyretic which even temporarily lessens organic combustions. Salicylic acid is of limited and doubtful utility. Clinical experience has determined that quinine is a veritable antipyretic, and therefore, in a sense, specific in all fevers.

A few years ago we should have shuddered at the suggestion of giving to a child three years of age, laboring under a fever heat of 105° F., five grains of quinine every hour, with the view of bringing down the fever; now we find by experience that such doses produce no immediate bad effects, and that we can obtain a fall of several degrees by a few doses. Much larger doses may be given to adults, generally with gratifying results. Any cinchonism that ensues is of transient duration. The quinine in dose of a couple of grammes is often conjoined with the cold bath, with more marked antipyretic effect.

It is not claimed that the antipyretic cuts short the febrile processes; the most that the advocates of this treatment claim is that by virtue of its anti-fermentative action on the blood or its tonic effect on the tissues, or by virtue of being a *germicide*, quinine restrains excessive waste, promotes assimilation, checks the riotous production of bioplasm, and thus rescues the tissues, and especially the heart, from the destructive effects of high heat. If it acts as an antiseptic or germicide, it is certainly not very successful in its work, as it does not cut short the fever. To do good its use must be persevered in, and it must be given boldly. Whenever the temperature reaches 104° F. the quinine treatment must be commenced, and it must be given in repeated large doses at short intervals till the temperature falls to nearly the normal figure. (Ten grains an hour to an adult will bring down the fever heat after a few doses to nearly the normal.)

The next antipyretic to be mentioned, and probably the first in importance, is cold, applied in the form of cold baths, sponge baths, wrappings of ice-cold water, or ice-bags.

Twenty years ago it would have been considered madness to take a child, in the first stage of scarlet fever, manifesting delirium or stupor from febrile exaltation and the force of the virus, immerse it in cold water, and keep it there for several minutes, pouring (it may be) cold water on the head of the child till rigor supervened, the thermometer indicating the point at which the child should be removed from the bath. Now this is done with seeming im-

punity, and is countenanced by good clinicians as legitimate practice. Some of us country physicians think that in desperate cases we have saved life by these means. In ordinary practice cold baths are inconvenient, and our patients are shy of this mode of treatment; cold sponging is much resorted to as a substitute. The patient is stripped of his clothing and laid on a rubber cloth; he is rapidly sponged from head to foot with ice-cold vinegar and water till the temperature falls from 104° or 105° to nearly 100° F.; then he is wrapped in a dry flannel blanket, and returned to his bed. The cold sponging is repeated whenever the thermometer indicates 104° F.

As to the results of the antipyretic treatment, after an experience of nine or ten years, we cannot speak very confidently. The immediate effects are generally very salutary, but the fever runs on; repeated baths somewhat exhaust the patient, and our large doses of quinine may do lasting harm.¹ Certainly hospital statistics do not speak very encouragingly for the antipyretic treatment of fevers.² But clinical statistics are notoriously unreliable. It is to such statistics that homeopaths appeal, and we know with how little reason. The antipyretic system seems to be theoretically sound, and we have probably yet to learn how it may be most safely and efficiently managed. We must feel our way along, proving all things and holding fast that which is good; we must persevere, hopeful; follow the best lights; where certainty is impossible be content to remain in doubt; indulge no vain dreams; obey the dictates of common sense.

"I say, Fear not! Life still
Leaves human effort scope;
But since life teems with ill,
Nurse no extravagant hope.

Because thou must not dream, thou needst not then despair!"

In discussing the essay, Dr. Towle, of Haverhill, said that he had little faith in the antipyretic treatment. He was shy of extreme measures. — Dr. Lovejoy thought that quinine and cold baths simply combated symptoms, — the disease was not arrested; and said that if he were to put a child laboring under scarlet fever into a cold bath, and the child were to die, he should expect to be blamed for causing the child's death. — Dr. William Cogswell narrated instances that had come under his observation where large antipyretic doses of quinine seemed to do good. — Dr. Huse, of Georgetown, had treated scarlet fever with tepid baths, the water being gradually cooled down to 60° F., with benefit. This treatment was repeated every day for a week. — Dr. Stackpole gave very little medicine in fevers, and believed in simple treatment: we have to work so much in the dark that we should be cautious and expectant. He

¹ "If administered in heroic doses it frequently overdoes the work required of it; it produces a cinchonism which adds to the burdens of the already struggling system, whilst it increases the derangement of the nervous centres and intensifies the disturbance of the digestive function." (Dr. Edward Warren in *Medical Record*, vol. xi., page 46.) See also Peters in the *Medical Record*, vol. xv., page 511. "Professor Lindworm cautions against its use in large doses in *weak heart*." "Professor Binz shows that large doses may produce death by paralyzing the heart." Niemeyer abandoned large doses. Woods and Bartholow speak of its irritant action on the alimentary canal.

² See *Medical Record*, November 9, 1878, page 366, for statistics which show that in Bellevue Hospital the antipyretic treatment has not been proven to be of certain therapeutic value. According to the *Medical Record*, vol. xv., p. 510, the mortality of several of the continental hospitals has greatly increased under this treatment.

would not dare to use the cold bath in scarlet fever, and did not believe in "reducing the pulse." — Dr. Manley had given up the quinine treatment, and substituted small doses of calomel, from which he had seen good results in fevers. — Dr. Chase believed in occasionally giving a large antipyretic dose of quinine, say a scruple, in typhoid fever. He had seen the fever heat come down in a few hours from 107° F. to nearly the normal. Dr. E. P. Hurd, in closing, said that one object of his paper had been to inculcate caution in the treatment of fevers, we know so little about the causes of fever and the action of medicines.

PROCEEDINGS OF THE NORFOLK DISTRICT MEDICAL SOCIETY.

JANUARY 14, 1879. *Vaccination followed by Death.* — After the transaction of business, DR. PETERS, of Roxbury, read the case. Virus was bovine, fresh, and of the best quality. Perfectly developed vesicles the eighth day. Next seen the fourteenth day. The space occupied by the three vesicles, with the skin around it, was black and sloughing, forming a deep ulcer two and a half inches long by more than an inch broad. Elsewhere on arm were superficial ulcerations, and three blebs filled with turbid, serous fluid. Arm twice the size of its fellow, boggy and œdematous. At shoulder-joint and half-way to sternum vivid redness of skin. Little constitutional disturbance. Each of the next three succeeding days the constitutional disturbance grew more serious, while the appearance of the arm was steadily improving. The urine became scanty and high colored, the face white and slightly puffy; but on the morning of the eighteenth day these symptoms were improved, and the child seemed better, while the arm was rapidly healing. A little later in same day hands and feet grew cold, chill crept up the limbs, the skin turned bluish, and the child was soon dead. No urine could be obtained before or after death. — DR. S. C. MARTIN said that the fatal result in that case was due to the constitution of the child or to septic influences near its home. Five hundred individuals were successfully vaccinated from the same animal, and probably thirty from the same vesicle. — DR. PETERS replied that he had made no complaint of the virus. He had used the same on other children, and the resulting vesicles had run a regular course. The child that died had had some infantile ailments some time previously, and he had waited until it was in good health before vaccinating. The house was in the neighborhood of a marsh, but the family lived in an upper story. He did not notify Dr. Martin, because he did not hold the virus responsible for the death. — DR. EMERY, of Roxbury, said that he vaccinated a healthy child with fresh animal virus. Immediately the weather became intensely cold. On the eighth day there was a typical vesicle. Several days after was called to child, and found a large, deep ulcer where vesicle had been, with redness, swelling, etc. Applied poultices, but abscesses formed in axilla, and above and below the ulcer, and just above the elbow. Child recovered under supporting treatment. Dr. Emery received information from the mother that the child slept in an intensely cold room (he believed thermometer would have proven temperature to be below zero), and that she found the child one morning sitting up in bed, uncovered, and scratching the vesicle

with its finger nails. He could learn of no other cause for the trouble. — Dr. H. A. MARTIN thought that if one hundred children after vaccination were exposed to temperature below zero they might all suffer as did the patient of Dr. Emery. The causes of trouble are almost always connected with morbid atmosphere, irritation of sore, and lack of care. The sleeve becomes glued to the arm, and the scab is torn off. The matter becomes putrescent, and develops intensely septic poison. All cases should be investigated by impartial men. — Dr. CUSHING, of Dorchester, expressed doubt whether any one could produce erysipelas at will, and the case of Dr. Peters was undoubtedly one of erysipelas. He thought the lesson to be drawn was that no matter how carefully the virus be selected, or how judiciously the time be chosen, fatal accidents will sometimes occur. All cases of this kind should go on record, to show that the best precautions will not always avail.

Ingrowing Toe Nail and its Treatment. — Dr. H. A. MARTIN read a paper on *Ingrowing Toe Nail and its Treatment, Ancient and Modern*. (Reserved for publication.) — Dr. MECTEN, of Roxbury, had successfully treated two cases (one of which was double) in the following manner: He elevated the edge of the nail, and passed deep through it a needle armed with heavy silk. The silk was then passed through a strip of adhesive plaster, which was drawn over a fulcrum formed of the half of a piece of lead-pencil, round surface down, close to the nail. Thus the nail, which had been first scraped thin, was kept elevated. A dressing of boracic acid and lint was employed.

MACKENZIE ON DIPHTHERIA.¹

IN this little book of one hundred pages is contained a very interesting and learned treatise upon the disease in question, and the author has brought to the task not only the results of his large experience, but also a thorough knowledge of the medical literature pertaining to the subject, both modern and historical.

It might reasonably be feared that a special practice in diseases of the throat would lead one to attach too great importance to the local manifestations of so complicated a disease as diphtheria, but no such charge can be made with justice in the present case.

The bibliographical references in the foot-notes are very numerous, extending backwards, in the chapter on the History of Diphtheria, to the work in Sanscrit by D'hamantare, to a time about coeval with Pythagoras. There is claimed to be found in this book a description very suggestive of diphtheria. The Askara, frequently mentioned in the Talmud as a fatal epidemic, is said by Dr. Mackenzie to be supposed to have been diphtheria. It was described by Rashi, the learned commentator of the Talmud and Old Testament, who remarks that "sometimes it breaks out in the mouth of a man, and he dies from it." He further observes that "sudden death comes from suffocation."

¹ *Diphtheria: Its Nature and Treatment, Varieties and Local Expressions*. By MORELL MACKENZIE, M. D., London, Senior Physician to the Hospital for Diseases of the Throat and Chest, Consulting Physician to the North Eastern Hospital for Children, and Lecturer on Diseases of the Throat at the London Hospital Medical College. Philadelphia: Lindsay and Blakiston. 1879.

The "Syriac ulcer," described by Aretæus at the close of the first century after Christ, is considered also to have many points of resemblance to the diphtheria of to-day. Actius of Amidas in the sixth century delineated a disease as presenting white and ash-gray spots in the pharynx, slowly ending in ulceration. From that period there is no record until the sixteenth century, when its occurrence in Holland was described by Peter Forest (1557), and a few years later most accurately by Von Woerd (1585).

The first published description with definite mention of a false membrane was by Baillou, a French physician (1576). The literature since then has been large, at first by Spanish and Italian physicians; and from the middle of the eighteenth century on, the contributions have been abundant, both by English, Continental, and American writers, in the form of monographs upon recorded epidemics.

The ætiology and pathology are ably discussed. In the chapter on pathology we find at the end the following summing up:—

"The most cursory study of the general pathology of diphtheria suffices to assure us that it is an acute general disease, with certain local manifestations. The *primary septicæmia* is due to the specific poison, but absorption from the decomposing lymph is, no doubt, a cause of *secondary infection*. In all cases the attack is associated with some degree of constitutional disturbance, while in the severest forms there is extreme disorganization of the blood, and consequent implication of nearly every tissue in the body. The general infection is shown at a very early stage, as well as at a period when the local manifestations have disappeared. Besides the constitutional disturbance by which the attack is ushered in, there is the frequent derangement of the renal function, the marked prostration of strength, the functional disturbance of the heart, and, at a later period, the extensive implication of the nervo-muscular system. The local symptoms, the false membrane, with its parasitic growths, must be looked upon as the first evidence of constitutional poisoning; in fact, as the first of the secondary phenomena."

The description of the symptoms of the disease is given as they occur in the following six different constitutional forms: (1) the typical form; (2) the mild or catarrhal form; (3) the inflammatory form; (4) the malignant form; (5) the gangrenous form; (6) the chronic form. Differences dependent on site are described under (*a*) nasal diphtheria, and (*b*) laryngeal diphtheria or croup. At the end of this chapter there is a special discussion of some of the most important symptoms of the disease, namely, albuminuria, the false membrane, fever, and cutaneous eruptions. The secondary elevation of temperature described by Faralli as occurring in cases of moderate severity towards the fourth day is referred to, and is explained as due to, the appearance of fresh diphtheritic patches on parts previously healthy; or, more frequently, to the appearance of glandular enlargements, the result of secondary infection. The paralyses are described in a separate chapter.

In the chapter on Diagnosis the rules given are simple and practical, the author frankly acknowledging the frequent difficulty, as well as the impossibility in some cases, of making an absolute diagnosis. The difficulty is generally confined to those cases which deviate from the normal type in the direction either of unusual mildness or of exceptional severity.

The chapter on Prognosis is followed by that on Treatment. This latter is full of interesting and valuable information, and the rules for general and local treatment are based upon sound ideas as to the pathology of the disease.

The author's views on the relation of croup and diphtheria are made manifest by the title to Chapter IX., Laryngo-Tracheal Diphtheria (formerly called Croup); and the arguments in support of them are skillfully presented. The complete identity of all cases of croup with diphtheria, however, is by no means a universally accepted fact; and in view of the question being still a mooted one, the report of the commission of the Royal Medical and Chirurgical Society of London, shortly expected, will be awaited with great interest.

Short chapters on Nasal Diphtheria and Secondary Diphtheria bring the book to a close.

It may be a disappointment to some that the author has not enriched the pages with cases and statistics from his own large practice. The book, however, is modestly claimed in the preface to be "a short sketch of the affection from one who has had considerable opportunities of studying it." It is certainly a great deal more than that, and will be considered a valuable contribution to the literature of this disease.

PUBLIC HEALTH IN MINNESOTA.

THE seventh annual report of the State Board of Health of Minnesota contains, as usual, much that is of great interest and value. The discussion of the appearance of small-pox in that State and its limitation to very narrow areas illustrates well the ease with which a general epidemic of that disease may be prevented by wise and vigorous action. The board prefers fresh animal vaccine matter to the humanized.

The paper by Dr. Staples on diphtheria occupies about one half of the report, embodying the replies to inquiries from thirty-five of the fifty-three physicians to whom circulars were sent, and also the results of microscopical investigations by Dr. Boardman and Professor Danforth. From 1870 to 1877, the deaths in Minnesota from diphtheria were for the several years respectively 63, 62, 41, 236, 226, 379, and 379. Beside the unknown element in the causation of the disease, by virtue of which it appears, disappears, reappears, and prevails for periods of various lengths in different places, damp soil, bad drainage, possibly polluted drinking-water, foul air, filth, damp and cold weather, and debilitated constitutions, one or several, were associated with the cases of diphtheria with greater or less frequency. In some towns the disease appeared to be of spontaneous origin; commonly it was shown to be contagious and infectious. — good illustrations being given from Rochester, Eyota, and St. Peter. A young man came to work in harvest for Mr. S. from a town ten miles distant, where his sister and brother had died of diphtheria, although he did not have the disease. One week after his arrival, Mrs. S. was taken with diphtheria. The boy did not sleep in the house, but Mrs. S. had handled some of his clothing. She had a comparatively mild run of the disease. Mrs. S. had a nursing infant. One week from the time of the attack of the mother, the babe was taken sick, and died in fourteen days. Its throat was very much

swollen, and there was a yellow exudation in it with a bad odor. Within a week of the child's death, two hired men and a servant-girl took the disease, but recovered. They were all well by the 1st of September. Mr. S.'s little boy, who had happened to be away at his grandmother's during all the sickness, was brought home on the 20th of October. The child was at home one week, when he was taken with diphtheria, and died in a week from the time of the attack. No other cases occurred in the neighborhood. The S. family was at the time living in a log house. . . . At a time when diphtheria was not prevalent within a radius of ten miles, a lady went to a remote part of the county to attend the funeral of a relative who had died of this disease. She there came in contact with others of the family then sick. In a week she had a severe attack of diphtheria. Her babe took the disease from its mother, and died; the other remaining child had a severe attack, and several cases followed in the neighborhood. As to the question of the virulence of the contagion giving character and severity to the disease, in the above cases, it was found that in this particular family three out of five died. Those taking the disease direct from these malignant cases suffered more severely than in cases where the disease was contracted later in the little epidemic that followed. . . . Two cases have occurred where it *seemed* to have been conveyed by infected clothing a distance of many miles. The first was the case of Mr. S., who visited a family twelve miles from his home, where there was diphtheria. In one room five were sick, and the air was very offensive. Five days after his return home, his daughter fell sick, and on the following day a young man in his employ. These were the first and only cases in the neighborhood. The second case was very similar. A mother visited a daughter twenty miles away, whose child was sick of diphtheria, and died during her stay. She returned home, and on the sixth day after one of her children came down with the disease, and in a few days still later two others. There were no other cases in that vicinity. Many other cases pointing toward the infectious nature of the disease have occurred, and the evidence is strong that it is often spread in this way. In pure air, and upon dry, porous soil, even when not always clean, the contagious and infectious element seemed, with a few exceptions, nearly if not quite wanting, and the disease pursued a very mild course; and in the most severe outbreaks the rigid isolation treatment practiced in small-pox was apparently successful in "stamping out" the disease. There is the common difference of opinion as to the identity of membranous croup and diphtheria. The mortality reported was, from 13.7 to one hundred per cent., no account being given, in that particular, of the mild epidemics and sporadic cases. The measures recommended are general attention to sanitary laws, including cleanliness, isolation, disinfection, and a supporting treatment.

Dr. Peckham's paper on the sanitary water survey of the State shows the constant and increasing danger of contamination of soil and water by the usual methods of constructing and managing privies and cess-pools, and the evils arising from pollution of streams by sewers. Professor Peckham suggests a useful form of lantern devised by him, as a result of experiments, for avoiding the danger of accidents from dust, fires, and explosions in flouring mills. He closes the top and bottom of the lantern by three or more plates of tin placed horizontally about one quarter of an inch apart, and arranged with holes

through them as follows, commencing, say, at the bottom: The lower plate is perforated with holes near the right side; the next plate above has holes near the left side; in the next above, the holes are in the right side, and so on through as many plates as desired, the top to be arranged in the same way. The air then would enter at one end of the lower plate, pass between the plates and through the other side of the second plate, then across again between the second and third plates, and then through the third, and so on into the lantern. With such an arrangement the force of the dust is completely broken upon passing through the first and striking the second plate. Hardly any dust enters the lantern under the most favorable conditions that can be contrived for getting it in, and no flash is produced.

In his report as a delegate to the yellow fever conference in Richmond, Dr. Hand, president of the board, makes the sound statement that "a judicious quarantine may be of service, but the most absolute non-intercourse with the West Indies will not prevent, at times, the spread of yellow fever in this country. The one fact of which we are sure is that the thorough cleansing and draining of our cities will take away from the disease its worst features, and will probably check its epidemic influence." He gives an interesting account of an epidemic at Newbern, in 1864, of which he says, "So sure were we of its non-contagious character that dozens of yellow fever patients from Newbern were admitted to the Morehead City General Hospital, and placed indiscriminately in the wards with other patients, yet in no single instance did any patient or attendant take the disease. Nor could any proof be found of the disease having been imported. Newbern is situated forty miles inland, on a river at that time strictly guarded by gunboats, and was under such rigid martial law, it seems impossible any infected person or thing could have been brought there without our knowledge. Every effort was made to trace any possible source of importation, but always without success. Of the twenty-two medical officers, all Northern men, who were with me during that epidemic, eleven died of the fever, but all the others, when the epidemic was over, joined me in the report that it was of *local origin*." In speaking of the report of the yellow fever commission that in a non-intercourse quarantine lies our only safety from yellow fever, and of their statement that towns which, like Natchez, Miss., shut themselves in and held no intercourse with the outside world escaped the pestilence, while it was spreading all around them, and that the same held good at some farm-houses, where the head of the family sat all day long, with a shot-gun, on the porch, and allowed no one to come through his gates, Dr. Hand shows the incompleteness of their investigations in stating the well-known fact that other observers, men careful and calm in the face of a great danger, say "this same immunity existed at Huntsville, Ala., and other towns, where no barbarous ordinance kept out the sick and weary refugees from infected districts;" also, that at many farm-houses where all were welcomed, and where many sickened and died of yellow fever, there was no spread of the disease to members of the household.

The report closes with carefully prepared statistical papers on the meteorology of Minnesota for 1878 by Dr. Leonard, and on the health of pupils in public schools by Dr. Hewitt, secretary of the board, which our space, unfortunately, compels us to pass over without more extended notice.

MEDICAL NOTES.

— The present number closes the one hundredth volume of the JOURNAL. The prospect never has been brighter during its long period of existence than to-day. The present volume is much larger than any of its predecessors, and each month additional space is given to meet the greatly increasing quantity of material. The editorial staff is carefully organized and fully prepared to meet the demands of the greater sphere of usefulness which is opening before us. The publishers evince a most liberal spirit, being ready to second the efforts of the editor, and we hope soon to make further important changes which will add to the value of the JOURNAL. We trust our efforts will meet the approval and support of the medical profession.

— In some parts of Germany, says the *Medical Press and Circular*, physicians are not permitted to dispense medicines when there is an apothecary in the place to do it for them. We learn from the *Allg. hom. Zeit.* that three homœopathic physicians were practicing in Regensburg, when an apothecary of the same belief came among them, and notified them to send their prescriptions to him. Two of them refused, and were brought before the court and fined about five dollars. The case was carried to a higher court, and the medicines (pellets) sent to the University of Erlangen for chemical analysis. The chemists of the university failed to find anything in them of a medicinal or poisonous nature, and so reported, whereupon the judge reversed the decision of the lower court, and declared that there was no law that prevented physicians from distributing sugar-plums (*Zuckerwaaren*) as freely as they chose.

PHILADELPHIA.

— In an obituary notice published in the last number of this journal, page 870, it was stated that Dr. Maury had tied the innominate artery, which is incorrect. He ligated, at the Jefferson Medical College, the right subclavian in its third portion, in a case of axillary aneurism after failure of systematic compression. The patient subsequently perished, with secondary hæmorrhage, on the tenth day. (Report published in *Philadelphia Medical Times*, vol. iii., page 404.) The innominate artery has never been tied in Philadelphia to the best of the writer's knowledge.

— By the will of the late Dr. George B. Wood, the University of Pennsylvania acquires the ownership of his pathological cabinet (already deposited with the institution, and in use for a number of years by the chair on theory and practice of medicine), and also his medical herbarium, a special bequest of five thousand dollars being added to establish and support a botanical garden and conservatory. He also directs that fifty thousand dollars shall be paid out of his estate to the trustees of the said institution for the endowment and support of chairs in the summer course of lectures, and seventy-five thousand dollars to build a clinical hospital, or as a fund for its maintenance. After devising to the College of Physicians fifteen thousand dollars and his medical library, he bequeathes the residue of his estate (excepting a few private bequests) also to the University of Pennsylvania for the said hospital for clinical lectures on medicine and surgery. Owing to the great depression in the value

of real estate, it is scarcely believed that the testator's wishes can be fully carried out, or that as much will be realized as he intended.

— By the will of Judge Asa Packer, it is reported that Jefferson College will receive a bequest of five thousand dollars.

CHICAGO.

— The State Board of Health, now in session in this city, has just promulgated its decision in the case of the Hahnemann Medical College, charged by some of its alumni with conferring diplomas improperly. The board had declared two years ago that it would not recognize the diplomas of colleges which conferred degrees without actual attendance upon two courses of lectures, said courses to be at least six months apart. It was proven that in at least two instances the offending college had violated this rule, but there were, so it is said, extenuating circumstances, and as the faculty promised they would not do anything wrong again, and protested that they had not meant to be naughty at all, it was agreed simply to declare that the two bad diplomas would not be recognized if they were presented (which they have not been, nor would be), and to administer a very mild rebuke to the college for its lack of care in the conduct of its business.

ST. LOUIS.

— Dr. Walter Wyman, who for some three years has had charge of the marine hospital at St. Louis, has been ordered to Cincinnati, to take charge of the marine hospital at that place. The position which he vacates will be filled by Dr. H. W. Sawtelle, from Norfolk, Va.

— The Missouri State Dental Association convened June 17th at Sweet Springs, Mo. Dr. A. H. Fuller, of St. Louis, presided.

SHORT COMMUNICATIONS.

IN-GROWN TOE NAIL.

MR. EDITOR. — A friend has called my attention to Dr. McCluer's letter in your JOURNAL of the 12th inst.

It is really amusing to note how great a stir a small matter may sometimes create. At first the suggestion was ignored as of little or no account; then, again, there was nothing new about it; now that it appears effective everybody claims it for himself, his friend, or some one else. Never mind, if, in the interest of patients, it be acted upon, — for there is satisfactory evidence that it is a good thing.

In point of fact, however, the operation was performed by me several years before the discovery of the anæsthetic power of ether; in the first instance to avoid repetition of evulsion in an aggravated case where that "barbarous practice" (Gross) had been attended with excruciating pain and followed by severe symptoms, without success. A plan to meet the case was then reasoned out, and, seeming philosophical, was resorted to, to remove the disease and enough of the adjacent healthy flesh to prevent, through the contraction of the cicatrix, its return. The scheme, wholly my own and untried so far as I know, promised well. The experiment, for such it then was, would require but an instant, — a great point in those days, — one stroke of the knife, and would be over almost before the patient had time to utter a single groan. It was tried, and succeeded.

The operation was repeated in other cases, from that time to this, with satisfaction to all concerned. As occasion offered the method was described to other practitioners and to

local societies, and was noticed in 1866 in the printed proceedings of one where it had been incidentally alluded to in connection with another matter. Possibly it was published before. I have a record of a case in 1851, where a second evulsion had previously proved unsuccessful. The paper published in January, 1873, was a hurried-up restatement to appease the JOURNAL.

There is perhaps no reason why my operation might not have been known in Holliston even before the ether discovery, as it was here, it being no secret; nor any, that I know of, why his may not have originated with Dr. McCluer in 1853-4, as again much later with Dr. I. M. Hamilton, of Monmouth, Ill. Both these gentlemen, however, were antedated by Mr. Stilwell. They did not publish until 1877, and, after all, without rationale, and seem to take to unnecessarily complicated and prolonged methods.

Originality or priority is of less consequence than usefulness, and not worth contention. More than one invention has had many claimants. There are scores of unsatisfactory operations for the disease in question. Let this operation have a fair trial, according to the principles advanced for it; that is the main thing.

Respectfully yours,

B. E. COTTING.

REPORTED MORTALITY FOR THE WEEK ENDING JUNE 14, 1879.

Cities.	Popula- tion estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from					
				The Prin- cipal "Zymo- tic" Diseases.	Diarrheal Diseases.	Pneumo- nia.	Diphtheria and Croup.	Scarlet Fe- ver.	
New York.....	1,085,000	441	21.19	22.22	6.35	6.80	3.40	5.44	
Philadelphia.....	—	275	—	14.91	3.64	—	2.18	4.86	
Brooklyn.....	564,400	154	14.23	15.59	5.84	3.24	4.55	—	
Chicago.....	—	120	—	20.83	8.33	8.33	5.83	3.33	
St. Louis.....	—	151	—	25.16	19.87	2.65	1.32	—	
Baltimore.....	365,000	145	20.71	24.83	15.17	5.52	6.21	2.07	
Boston.....	360,000	117	16.94	16.24	1.71	2.56	9.40	.85	
New Orleans.....	—	105	—	16.19	11.43	3.81	—	—	
Cincinnati.....	—	95	—	29.47	13.68	3.16	2.11	10.73	
District of Columbia...	160,000	112	36.50	26.79	23.21	8.04	—	.59	
Cleveland.....	—	—	—	—	—	—	—	—	
Pittsburgh.....	—	45	—	26.09	2.17	4.34	10.87	—	
Buffalo.....	—	—	—	—	—	—	—	—	
Milwaukee.....	—	33	—	21.21	3.03	6.06	6.06	3.03	
Providence.....	101,000	33	17.04	21.21	—	6.06	12.12	—	
New Haven.....	60,000	20	17.38	10.00	10.00	5.00	—	—	
Charleston.....	57,000	32	29.27	21.88	15.62	—	3.12	—	
Nashville.....	27,000	13	25.11	39.77	23.07	7.69	—	—	
Lowell.....	53,300	10	9.78	30.00	—	—	10.00	—	
Worcester.....	52,500	9	8.94	22.22	—	—	—	—	
Cambridge.....	51,400	15	15.21	26.67	—	6.67	6.67	13.33	
Fall River.....	48,500	22	23.65	27.27	—	—	—	22.73	
Lawrence.....	38,200	9	13.81	—	—	—	—	—	
Lynn.....	34,000	18	27.61	38.89	5.55	16.67	22.22	—	
Springfield.....	31,500	9	14.90	22.22	—	—	22.22	—	
New Bedford.....	27,000	8	15.45	—	—	—	—	—	
Salem.....	26,400	11	21.73	9.09	—	—	—	—	
Somerville.....	23,350	3	6.70	—	—	33.33	—	—	
Chelsea.....	20,800	6	15.04	—	—	16.67	—	—	
Taunton.....	20,200	—	—	—	—	—	—	—	
Holyoke.....	18,200	6	17.19	33.33	—	—	16.67	—	
Gloversville.....	17,100	3	9.15	—	—	—	—	—	
Newton.....	17,100	7	21.34	28.57	—	—	28.57	—	
Haverhill.....	15,300	—	—	—	—	—	—	—	
Newburyport.....	13,500	3	30.90	12.50	—	12.50	—	—	
Fitchburg.....	12,500	5	20.86	20.00	—	—	20.00	—	

Two thousand and forty-one deaths were reported: 426 from the principal "zymotic" diseases, 286 from consumption, 175 from diarrheal diseases, 99 from pneumonia, 83 from diphtheria and croup, 63 from scarlet fever, 40 from bronchitis, 34 from typhoid fever, 25 from whooping-cough, 13 from measles, 11 from erysipelas, eight from cerebro-spinal meningitis, five from malarial fevers, five from small-pox, four from trismus nascentium, one from pleurisy. From *bronchitis*, 19 deaths were reported in New York, five in Brooklyn, three in Chicago and Pittsburgh, two in St. Louis, one in Boston, New Orleans, District of Colum-

bia, Milwaukee, Providence, New Haven, Cambridge, and Salem. From *typhoid fever*, 12 in Philadelphia, four in New York and Chicago, two in District of Columbia and Providence, one in Brooklyn, St. Louis, Baltimore, Boston, New Orleans, Cincinnati, Pittsburgh, Milwaukee, Worcester, and Salem. From *whooping-cough*, seven in New York, four in Brooklyn, three in Pittsburgh, two in Boston, Cincinnati, and Lynn, one in St. Louis, District of Columbia, Milwaukee, Providence, and Cambridge. From *measles*, six in New York, two in St. Louis and Pittsburgh, one in Brooklyn, Baltimore, and Lowell. From *erysipelas*, two in New York and Boston, one in Philadelphia, Brooklyn, St. Louis, Milwaukee, Charleston, Nashville, and Lowell. From *cerebro-spinal meningitis*, three in New York, one in St. Louis, Worcester, Fall River, Holyoke, and Newburyport. From *malarial fevers*, four in New York and New Orleans, one in District of Columbia. From *small-pox*, five in New York. From *trismus nascentium*, two in Charleston, one in District of Columbia and Baltimore. From *pleurisy*, one in Chicago.

Allowing for Cleveland and Buffalo, not reported, the deaths from bronchitis, diphtheria and croup, and whooping-cough show no noteworthy change; from scarlet fever and cerebro-spinal meningitis the decrease of the past two weeks continues; from measles and erysipelas there is an increase over the previous two weeks; in the last month the progressive weekly increase from typhoid fever has been moderate, from the total of "zymotic" diseases and diarrhoea very great; pneumonia and consumption are becoming less fatal again; small-pox is reported only in New York; the total mortality for the week shows a slight increase. In seventeen of the nineteen cities of Massachusetts, with an estimated population of 844,555, the mortality from pneumonia and diarrhoea was less than for the previous week; no other noteworthy change.

The weather was generally variable, fair, and clear, and cool for the season; the meteorological record for the week in Boston (latitude $42^{\circ} 41'$, longitude $71^{\circ} 4'$) being as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humid-ity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in Inches.
June 8	30.011	68	70	45	58	23	41	41	NW	NW	NW	8	20	6	C	C	C	—	—
" 9	29.994	62	66	49	58	55	48	54	NE	SE	W	4	6	1	C	F	F	—	—
" 10	29.906	61	81	55	77	77	58	73	S	SW	N	4	9	8	O	F	F	—	—
" 11	29.916	63	84	52	86	82	87	87	N	SE	S	6	8	10	O	O	O	—	.09
" 12	29.784	57	62	50	100	93	100	98	E	SE	SE	4	3	7	G	O	O	—	.02
" 13	29.775	65	76	60	87	69	39	61	N	E	NW	10	12	12	F	C	C	—	—
" 14	29.782	68	78	51	69	31	43	48	W	W	W	12	16	11	F	C	O	—	—
Week.	29.885	62	82	45				66			W			1323 miles.				4.3	.11

¹ O, cloudy; C, clear; F, fair; G, fog; H, haze; S, snow; R, rain; T, thunder; and

For the week ending May 24th, in 149 German cities and towns, with an estimated population of 7,537,346, the death-rate was 29.1, an increase of 0.7 over the previous week, indicating a marked increase in deaths from all causes, and from acute diseases of the pulmonary organs, diphtheria and croup, puerperal fever, typhus fever, and measles; no deaths were reported from small-pox; the other prominent diseases remained without noteworthy change. Four thousand two hundred and eleven deaths were reported: 585 from consumption, 565 from acute diseases of the respiratory organs, 194 from diarrhoeal diseases, 146 from diphtheria and croup, 66 from typhoid fever, 60 from scarlet fever, 53 from measles, 46 from whooping-cough, 33 from puerperal fever, 12 from typhus fever. The death-rates ranged from 15 in Mayence to 47.7 in Munich; Königsberg 24.7; Dantzic 23.3; Breslau 35.1; Dresden 24.7; Cassel 30.3; Berlin 26.1; Leipsic 21.8; Hamburg 32.0; Hanover 27.0; Bremen 32.9; Cologne 30.1; Frankfort-on-the-Main 20.9; Darmstadt 20.8. Also for the same week, Vienna 32.2; Prague 35.5; Trieste 29.6; Geneva 22.4; Paris 24.8; Christiania, 14.3.

For the week ending May 31st, in the 20 English cities and towns having an estimated population of 7,383,999, the death-rate was 20.5, a decrease of 0.9 from the previous week, showing a marked decline in pulmonary diseases, whooping-cough, fevers, and especially in small-pox; diarrheal diseases remained about the same; diphtheria showed a slight, scarlet fever a moderate, and measles a very great increase. Two thousand nine hundred and three deaths were reported: 283 from diseases of the respiratory organs, 106 from measles, 91 from whooping-cough, 89 from scarlet fever, 35 from diarrhoea, 23 from fever, eight from small-pox (in London). The death-rates ranged from 14.8 in Brighton to 27.7 in Newcastle-on-Tyne; London 20.6; Portsmouth 16.2; Plymouth 15.4; Bristol 16.9; Birmingham 18.8; Liverpool 22.6; Manchester 24.4; Leeds 17.6. In Edinburgh the rate was 25; in Glasgow 23. In Dublin small-pox showed again a considerable increase.

The international board of health in Constantinople have modified their quarantine regulations by exclusion of rags, old clothes, soiled under-clothing and bedding, and by holding vessels from suspected ports only long enough for medical inspection and, if deemed necessary, disinfection.

CIRCULAR CONCERNING THE PHYSICAL EXAMINATION OF SEAMEN OF THE MERCANTILE MARINE.

TREASURY DEPARTMENT,
Office Supervising Surgeon-General U. S. Marine-Hospital Service, }
WASHINGTON, D. C., June 11, 1879.

To Medical Officers of the Marine-Hospital Service, and others whom it may concern:—

(1.) To insure such owners of American vessels as desire the services of sound and healthy seamen facilities for the proper physical examination of crews, at all ports where medical officers of the Marine-Hospital Service are stationed, such officers will, upon the application of any United States shipping commissioner, or of the master or owner of any vessel engaged in the foreign trade, or passenger steamer engaged in the coasting trade, examine physically any seaman or seamen, and give a certificate as to their fitness or otherwise.

(2.) A record will be kept of all examinations of seamen, and a transcript thereof forwarded quarterly to the surgeon-general of the Marine-Hospital Service.

(3.) In all cases of rejection the certificate will state explicitly, in English, the reason for such rejection.

(4.) The loss of an arm or leg, defective vision, color-blindness, epilepsy, mental unsoundness, hernia, piles, fistulae, varicose veins, serious organic disease, habitual drunkenness, the existence of venereal disease, marked want of development, weakness of the body, or deformity should cause the rejection of any seaman desiring to ship.

(5.) No seaman will be examined for the purpose of giving such certificate except in the presence of a United States shipping commissioner, or the master, owner, or agent of the vessel on which the seaman is expected to be employed, and examinations will only be made at the Marine-Hospital Office.

(6.) The rejection of a seaman at one examination shall not debar him from subsequent examination in case he claims that the disease for which he was rejected has disappeared.

(7.) The provisions of this circular will also apply to enlisted persons in the revenue-marine, life-saving, coast-survey, and light-house services, and to persons desiring to enlist therein, upon the application of the proper officers of the respective services.

(8.) No fee will be charged by any medical officer for making the examination or certificate herein contemplated.

J. B. HAMILTON,

Surgeon-General U. S. Marine Hospital Service.

Approved: JOHN SHERMAN, Secretary of the Treasury.

THE GYNECOLOGICAL SOCIETY OF BOSTON. — The next regular meeting of the society will be held at the Medical Library Rooms, 19 Boylston Place, on the first Thursday of July, at two o'clock, P. M. The following papers are expected: Atresia Vaginae, by W. S. Brown, M. D.; a paper (subject not announced) by E. L. White, M. D. The profession are invited.

HENRY M. FIELD, M. D., *Secretary.*







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